COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF AGRICULTURE

BULLETIN No. 242

TABULATED ANALYSES OF

Commercial Fertilizers

FROM SAMPLES SELECTED IN ACCORDANCE
WITH ACT OF MAY 1, 1909

BY THE

PENNSYLVANIA DEPARTMENT OF AGRICULTURE

From January 1 to August 1, 1913

HARRISBURG, PA.:
WM. STANLEY RAY, STATE PRINTER
1913

OATH OF FERTILIZER SAMPLING AGENT.

Commonwealth of Pennsylvania, ss:

Personally appeared before me, ... of .....County of ..... and State of Pennsylvania, who being duly sworn, according to law, doth depose and say: That he has been duly appointed an agent of the Department of Agriculture of Pennsylvania to collect samples of Commercial Fertilizers for analysis, that he is not in any way interested in the manufacture or sale of any fertilizer, and that he will perform the duties of the office with fidelity in accordance with the requirements of law to the best of his ability, and as set forth in the instructions issued by the Secretary of the Department of Agriculture governing the sampling of fertilizers in this State.

Sworn and subscribed before me, this ..... day of ..... A. D. ..... } (Signed), ...

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The Act of 1st May 1909, Commonly Referred to as "The New Fertilizer Law" is as Follows:

No. 205.

AN ACT

To regulate the manufacture and sale of commercial fertilizers; prescribing penalties for its violation, and repealing an act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one.

Section 1. Be it enacted, &c., That every package of commercial fertilizer sold, offered, or exposed for sale, for manurial purposes within this Commonwealth, except the dung of domestic animals, lime, marl, and wood-ashes, shall have plainly stamped thereon the name and address of the manufacturer or importer and his place of business, the net weight of the contents of the package, the brand of trade-name of the fertilizer the package contains, and an analysis stating the percentage such fertilizer contains of nitrogen in an available form, of potash soluble in water, of soluble and reverted phosphoric acid, and of insoluble phosphoric acid.

Section 2. Every manufacturer or importer of commercial fertilizers, as specified in section one of this act, shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizers, as required by section one of this act.

Section 3. In addition to the statement required by section two of this act, every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the

sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade name sold within the State during the last preceding year: and if the said amount shall exceed one hundred tons, and be less than five hundred tons, he or they shall pay the sum of twenty dollars, as aforesaid; and if the said amount shall be five hundred tons or more, he or they shall pay the sum of thirty dollars, as aforesaid. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand, as aforesaid: Provided, That all monies so received shall be immediately paid by the Secretary of Agriculture into the State Treasury, for the use of the Commonwealth.

Section 4. No person shall sell, offer, or expose for sale, in this State, any pulverized leather, hair, ground hoofs, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact; said statement to be conspicuously affixed to every package of such fertilizer or manure, and to accompany and go with every lot, parcel, or package of the same.

Section 5. Any person or persons selling, offering, or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contains a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more then one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. It shall be the duty of the Secretary of Agriculture to enforce the provisions of this act, and all penalties, costs, and fines recovered shall be paid to him or his duly authorized agent, and by him shall be immediately paid into the State Treasury, for the use of the Commonwealth.

Section 6. The Secretary of Agriculture is hereby empowered to collect samples of commercial fertilizers, either in person or by his duly qualified agent or representative, and to have them analyzed, and to publish the results for the information of the public; and for this purpose the said Secretary of Agriculture, such assistants, agents, experts, chemists, detectives, and counsel as he shall duly authorize, shall have full access, ingress, and egress to and from all places of

business, factories, barns, buildings, carriages, cars, and vessels, used in the manufacture and transportation, or sale, or any commercial fertilizer. They shall also have power to open any package or vessel containing or supposed to contain any commercial fertilizer, and take therefrom samples for analysis, upon tendering the value of said samples.

Section 7. The term "commercial fertilizers," as used in this act, shall be construed to mean any and every substance imported, manufactured, prepared, or sold for fertilizing or manuring purposes, except the dung of domestic animals, marl, lime, and wood-ashes, and not exempt by the provisions of section one of this act.

Section 8. This act shall go into effect on and after the thirty-first day of July, one thousand nine hundred and nine; and the act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one, is hereby repealed.

Approved—The 1st day of May, A. D. 1909.

EDWIN S. STUART.

No. 95.

AN ACT

Making it unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone; and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That it shall be unlawful for any person, firm or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone.

Section 2. Any person or persons violating the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall pay a fine of fifty dollars for the first offense, and a fine of not less than one hundred dollars, nor more than two hundred dollars, for every subsequent offense; such fine or fines to be paid into the State Treasury, for the use of the Commonwealth. The Secretary of Agriculture shall, together with his deputies, agents, and assistants, be charged with the enforcement of this act.

Section 3. All magistrates, aldermen, and justices of the peace throughout this Commonwealth shall have jurisdiction to hear and determine actions arising from violations of the provisions of this act, and shall have authority to hold for court, or to impose the penalty hereby prescribed, subject to appeal, as the law shall direct.

Section 4. This act shall go into effect on the first day of January, Anno Domini nineteen hundred and ten.

Approved—The 23d day of April, A. D. 1909.

EDWIN S. STUART.

State College, Pa., July 16, 1913

Hon. N. B. Critchfield, *Secretary of Agriculture, Harrisburg, Pa.*

Dear Sir: I have the honor to transmit herewith my report upon the analysis of the samples of commercial fertilizers received from official sampling agents during the spring season of 1913.

Very respectfully,

WM. FREAR,

Vice-Director and Chemist.

The Penna. State College Agricultural Experiment Station.

FERTILIZER VALUATIONS.

The object of an official valuation of commercial fertilizers is to enable the consumer to judge approximately whether he has been asked to pay for a given brand more than the fertilizing ingredients it contains and market conditions prevailing at the time would warrant. It is clear, therefore, that no attempt is made in this valuation to indicate whether the fertilizer valued possesses a greater or less crop-producing capacity than another fertilizer; but only whether it is higher priced than another of the same general composition.

For this purpose the valuation must be so computed as to include all the elements entering into the cost of a fertilizer as it is delivered to the consumer. These elements as they occur in the usual transaction, which is a time purchase in small quantity from a local dealer or agent, may conveniently be grouped as follows:

1. The wholesale cost of the ingredients.
2. The jobbers' gross profit on the sale of the ingredients; this includes office expenses, advertising, losses, etc.; for the purpose of the present computation it may be assumed that the sum of this gross profit and the wholesale cost of the ingredients, is equivalent to the retail price of the single ingredients near the wholesale markets in ton lots of original packages for cash.
3. The expense and profit of mixing: This item applies only to complete fertilizers, rock and potash, and ammoniated rock; not to dissolved or ground bone, or to dissolved rock.
4. The expense and profit of bagging.
5. Agents' commission: This item includes not only the commission, proper, but every advance in price due to the sale of the goods through an agent in small quantities on time, rather than directly to the consumer in ton lots for cash.
6. Freight from the wholesale market to the point of delivery.

The valuations for 1912 were based:

1. Upon the wholesale prices from September 1, 1912; to March 1, 1913, of the raw materials used in fertilizer manufacture, the quotations of the New York market being adopted for all materials except acidulated phosphate, rock and ground bone.
2. Upon an allowance of 20 per cent. of the wholesale prices, above mentioned, to cover jobbers' gross profit.

By adding the 20 per cent. allowed for jobbers' gross profit to the wholesale price of the several raw materials, the retail price in original packages at the jobbers' warehouse is obtained.

Since the amount of the several valuable fertilizing constituents in the various raw materials is known, it is a simple matter to determine the corresponding retail value per pound of the valuable fertilizing constituents yielded by each raw material. A schedule of

these pound values affords a convenient basis of computation of the value per ton of various fertilizers, whose composition is ascertained by analysis.

The values assigned, for the present ,to the other elements in the cost of the fertilizer at the point of delivery are:

3. For mixing, $1.00 per ton.

4. For bagging, $1.00 per ton, in all cases except those in which the article was sold in original packages; the cost of the package being, in such cases, included in the wholesale price.

5. For agents' commission, 20 per cent. of the cost of the goods f. o. b. at the jobbers' or mixers' warehouse.

6. For freight, $2.00 per ton; the cost of the freight in lots of twelve tons or over, from the seaboard to Harrisburg, averaging $1.88 per ton.

The following valuation of dissolved South Carolina rock illustrates the method:

Phosphoric Acid.	%	Weight per ton.	
Available,	14.00	280 lbs. at 3c.,	$8.40
Insoluble,	1.00	20 lbs. at 1½c.,	.30
Retail cash value of ingredients,			$8.70
Bagging,			1.00
Cash value of goods ready for shipment,			$9.70
Agents' commission, 20 per cent.,			1.94
Freight,			2.00
Commercial value per ton,			$13.64

It is not to be expected, of course, that the valuations thus computed will precisely represent the fair price to be charged for a brand in each locality and in every transaction. Market conditions, competition, distance from factory, all introduce minor variations. Nevertheless, to make the approximation reasonably close the average valuation of a given class of goods ought to agree closely with its ascertained average selling price. Whenever such an agreement is no longer obtained by the use of a schedule, it is evident that the schedule of retail values of the constituents, or the added allowances for mixing, etc., requires revision.

It is needful to note here another factor greatly affecting the practical accuracy of these approximations. Their computation would offer little difficulty and their usefulness be far greater, if, by the ordinary methods of analysis, the exact nature of the ingredients used to supply the several fertilizer constituents, were capable of certain determination. This is, however, possible to-day to only a limited extent. The valuations are therefore based on the assumption that the fertilizers are uniformly compounded from high quality ingredients, such as are commonly employed in the manufacture of fertilizers of the several classes. Consumers should carefully avoid the error of accepting such valuations as infallible; they are not designed to be used for close comparisons of single brands, but only to indicate whether the price asked for a fertilizer is abnormal, assuming good quality for the ingredients used. From this it is

clear that, *except as high freights may require, the selling price of a brand should not far exceed the valuation; but that a fertilizer may be made of inferior materials and yet have a high valuation.*

Except where otherwise expressly stated, the valuations given in the analytical tables are not suited as guide to the prices for goods bought for cash, in large quantity, and directly from the manufacturer, importer, or jobber.

The valuations used during 1911 were modified for use during 1912 in accordance with the changes in wholesale prices of fertilizing ingredients and to make the valuations more closely follow the selling price.

The following comparative statement shows the valuations and selling prices of the several classes of fertilizers during 1908 to 1912.

Fertilizers.	Number of samples.	Valuation.	Selling price.	Difference of valuation from selling price.
Spring, 1908.				
Complete,	455	26.23	25.69	.54
Rock-and-potash,	108	16.24	16.96	—.62
Dissolved bone,	4	23.09	21.11	1.98
Ground bone,	21	28.96	29.04	—.08
Dissolved rock,	33	14.92	14.72	.20
Fall, 1908.				
Complete,	287	23.88	22.34	1.54
Rock-and-potash,	104	16 17	16.43	—.26
Dissolved bone,	6	26.05	22.48	3.57
Ground bone,	30	27.90	29.18	—1.28
Dissolved rock,	49	14.86	14.31	.55
Spring, 1909.				
Complete,	426	25.31	24.88	—.43
Rock-and-potash,	111	15.94	16.98	—1.40
Dissolved bone,	8	21.57	22.25	—.68
Ground bone,	24	30 28	30.70	—.42
Dissolved rock,	33	13.62	14.76	—1.14
Fall, 1909.				
Complete,	255	22.25	22.07	14
Rock-and-potash,	92	15.50	16.10	—.60
Dissolved bone,	3	22.85	24.50	—1.65
Ground bone,	26	28.71	29.39	—.68
Dissolved rock,	41	14.02	13.86	.16
Spring, 1910.				
Complete,	436	26.63	25.26	1.37
Rock-and-potash,	123	16.08	17.16	—1.08
Dissolved bone,	8	21.47	22.17	—.70
Ground bone,	24	30.27	30.19	.08
Dissolved rock,	47	14.00	14.56	—.56
Fall, 1910.				
Complete,	294	22.24	21.76	.48
Rock-and-potash,	109	16.34	16.38	—.04
Dissolved bone,	4	25.70	25.80	—.10
Ground bone,	29	31.10	29.98	1.12
Dissolved rock,	32	14.15	14.01	.14
Spring, 1911.				
Complete,	485	25.95	24.97	.98
Rock-and-potash,	129	15.99	17.05	—1.06
Dissolved bone,	6	23.82	20.33	3.37
Ground bone,	23	31.47	30.93	.54
Dissolved rock,	51	14.86	15.83	—1.58

Fertilizers.	Number of samples.	Valuation.	Selling price.	Difference of valuation from selling price.
Fall, 1911.				
Complete,	292	22.33	21.73	.61
Rock-and-potash,	129	16.07	16.25	—.18
Dissolved bone,	3	21.51	24.88	—3.37
Ground bone,	25	31.18	31.17	.01
Dissolved rock,	42	13.78	14.00	.22
Spring, 1912.				
Complete,	470	27.24	27.64	.40
Rock-and-potash,	137	16.26	18.27	2.01
Dissolved bone,	4	18.92	20.94	2.02
Ground bone,	24	33.26	32.81	.45
Dissolved rock,	43	14.20	14.69	.49

The following statement from the weekly reports of the Oil, Paint and Drug Reporter, of New York City, shows the average wholesale prices of fertilizer raw materials from September 1, 1910, to March 1, 1911, and from September 1, 1911, to March 1, 1912.

Substance.	Amount Priced.	Average price Sept. 1, 1911, to March 1, 1912.	Average price Sept. 1, 1912, to March 1, 1913.	Prices Sept.-March, 1912-1913, in per cent. of prices of 1911-1912.
Sulphate of ammonia,	Cwt.,	3.196	3.28	102.6
Nitrate of soda,	Cwt.,	2.224	2.56	115.1
Dried blood, H. G.,	Unit (20 lbs.),	3.019	2.736	90.6
Concentrated tankage,	Unit (20 lbs.),	2.542	2.40	94.4
Rough bone,	Ton,	23.12	23.25	100.5
Bone meal,	Ton,	29.05	29.25	100.7
Fish guano, dry,	Unit (20 lbs.),	3.228	3.113	96.3
Phosphate rock, Tenn.,	Ton,	5.25	5.25	100.0
Acid phosphate,	Unit (20 lbs.),	.525	.525	100.0
Double manure salt,	Ton,	24.66	24.95	101.1
Sulphate of potash,	Ton,	46.58	46.80	100.4
Kainit,	Ton,	8.333	8.45	101.4
Muriate of potash,	Ton,	38.18	38.55	100.9
Sulphuric acid, 66 degrees B.,	Cwt.,	1.05	1.05	100.0

In ammoniates such as dried blood and fish guano, the unit is of ammonia, of which 82.25 per cent is nitrogen; in acid phosphate the unit is of phosphoric acid (phosphorus pentoxid).

There has been a decided fall in the prices of some of the organic ammoniates, and a slight increase in the cost of nitrogen from inorganic sources. This places the two great classes of ammoniates upon practically the same basis, as concerns commercial values.

Acid phosphate, phosphate rock and sulphuric acid show no change in prices compared with last year.

Potash Salts: The New York Oil, Paint and Drug Reporter gives the following imports of potash salts for the years 1911 and 1912.

	1911.	1912.
Muriate of potash,	509,119,173	482,265,665
Sulphate of potash,	121,039,192	97,161,010
Kainit and manure salt,	737,852	683,202

Composition of Raw Materials.—In order to form a correct idea of the cost per pound of the fertilizer constituents of these materials, it is needful to determine their composition or, in other words, the quantities of valuable constituents each contains. The following table shows the composition of raw materials used in the manufacture of fertilizers. Few analysis of these materials, with the exception of ground bone and dissolved rock, have been made in Pennsylvania. The figures in the following table; include the averages of the results made in Connecticut, New Jersey and Massachusetts during the past year, except in the case of ground bone and dissolved rock phosphates, where Pennsylvania results alone are included.

Composition of Non-Acidulated Fertilizer Ingredients, (Per Cent.)

Substance.	Number of samples analyzed.	Nitrogen.	Potash.	Total phosphoric acid.
Sulphate of ammonia,	7	20.49	.....	.....
Nitrate of soda,	31	15.43	.....	.....
Dried blood,	10	12.15	.....	.....
Ground bone,	28	3.19	.....	22.95
Tankage,	25	6.12	.....	10.13
Ground fish,	.....	.....	.....	.....
Cottonseed meal,	295	6.58	.....	.....
Castor pomace,	3	4.69	1.02	1.75
Sulphate of potash,	13	.....	49.09	.....
Muriate of potash,	33	.....	51.16	.....
Kainit,	10	.....	13.62	.....
Double sulphate of potash and magnesia,	.....	.....	.....	.....

Composition of Acidulated Fertilizer Ingredients. (Per Cent.)

	Number of samples.	Total phosphoric acid.	Insoluble phosphoric acid.	Nitrogen.
Dissolved bone,	5	13.75	3.18	1.56
Dissolved phosphate rock,	60	15.35	1.02	.....

Cost per Pound of Fertilizer Constituents.—With the composition of these raw materials and their price per ton, hundred weight, or other unit of measure as a basis, the wholesale cost per pound of the valuable constituents can readily be calculated. In many cases the ammoniates are quoted "per unit of ammonia," the term unit being equivalent to per cent.; in goods sold by the ton of 2,000 lbs., the unit is equal to 20 lbs., and 20 lbs. of ammonia contain 16,47 lbs. of nitrogen.

In the case of refuse bone-black, unacidulated, the mean, 28.25 per cent. of phosphoric acid, is assumed to represent the average material on the market.

Phosphate rock is sold by the ton of 2,240 lbs., and on the basis of the bone phosphate of lime it contains, with drawbacks for injurious constituents. Bone-phosphate of lime contains 45.8 per cent. of phosphoric acid; therefore, each per cent. of bone phosphate in a long ton is equivalent to 22.4 lbs., and contains 10.26 lbs. of phosphoric acid.

In the wholesale trade, dried blood, azotine ,concentrated tankage and hoof meals are usually sold on the basis of ammonia, disregarding the phosphoric acid present.

Insoluble phosphoric acid in dissolved rock is likewise ommitted from consideration, contracts being based solely upon the "available" phosphoric acid; nor in rock phosphates is any claim made for the small quantities of nitrogen and potash they contain, nor in dissolved bone for the potash present.

Under these conditions, the wholesale cost per pound in New York of the valuable constituents of such materials as furnish but a single fertilizing element, these materials being assumed to be in the state of preparation and in the packing in which the manufacturer purchased them, are given in the following table; also a figure representing a fair retail price at the factory, the materials having undergone no change in treatment or packing and the allowance for expenses and profit in retailing being 20 per cent.

Wholesale Cost per Pound of Fertilizing Constituents, New York.

1. Ingredients Supplying One Constituent.

Materials.	Constituents Valued.	Wholesale price, cents.	Wholesale price plus 20 per cent., cents.
Sulphate of ammonia,	Nitrogen,	16.01	19.21
Nitrate of soda,	Nitrogen,	16.59	19.91
Dried blood,	Nitrogen,	16.54	19.85
Concentrated tankage,	Nitrogen,	14.54	17.45
Phosphate rock, Tenn., 78 per cent.,	Phosphoric acid, total,*	.73	.88
Acid phosphate,	Phosphoric acid, available,	2.63	3.16
Double sulphate of potash and magnesia,	Potash,	.....	.....
Sulphate of potash,	Potash,	4.77	5.72
Kainit,	Potash,	3.11	3.73
Muriate of potash,	Potash,	3.77	4.52

*The prices of phosphate rock are f. o. b. at the respective points of shipment, not New York. The prices for potash are taken from the schedule of the syndicate, and those of the remainder from the Oil, Paint and Drug Reporter.

The quotations for bone are given without specific reference to quality, so that it is impossible, from these data, fairly to apportion their several wholesale values to the nitrogen and phosphoric acid contained in this material. As compared with tankage, the general tendency is to assign a higher commercial rating to the phosphoric acid in bone, and to nitrogen, a rating not very different from that given in tankage.

In former years, the value assigned to the nitrogen has been the same as that quoted on crushed tankage, c. a. f. Baltimore. In later years, quotations for both crushed tankage and ground tankage have not been available, and for that reason, the value of bone nitrogen is based upon the quotations for concentrated tankage.

In earlier years, quotations on ground tankage have been about 5 per cent. in advance of those on concentrated tankage, also quotations on crushed tankage were on an average 12.67 per cent. in advance of these on ground tankage. Increasing the price of concentrated tankage by these percentages, we have $2.83 per unit of ammonia as the value assigned to the nitrogen in bone.

This is equivalent to $3.44 per unit of nitrogen.

The average composition of the ground bone and bone meal samples analyzed last fall in Pennsylvania was: Phosphoric acid, 22.95 per cent.; nitrogen 3.19 per cent.

The prepared bone contains less fat and moisture, and often less nitrogen than the ordinary rough bone, but these differences tend, in a measure, to neutralize each other. Assuming for the rough bone quoted in the New York market the same composition as the bone meal sold in Pennsylvania, and for the value of the nitrogen $3.44

per unit, as previously stated, the values per pound of the several constituents would be:

Wholesale Cost per Pound of Fertilizer Constituents, New York.

II. Bone.

Materials.	Constituent Valued.	Wholesale price, cents.	Wholesale price, plus 20 per cent.
Rough bone,	Nitrogen,	17.20	20.64
	Phosphoric acid,	2.68	3.22
Ground bone,	Nitrogen,	17.89	21.48
	Phosphoric acid,	2.79	3.35

Valuation in Neighboring States.

It is desirable, from all points of view, that the schedules of valuation throughout a district in which similar market conditions prevail, should differ as little as possible. It has been our practice in the past, to conform our schedule to that adopted after very careful cooperative study of the market conditions for each year, by the New England States, New York and New Jersey, except where the peculiar conditions of our markets have been made the valuations diverge too largely from the actual selling prices, as in the case of ground bone and dissolved rock phosphates. The schedules for these States for 1912 and 1913 are as follows:

Trade Values Adopted by the New England States and New Jersey.

	Cents Per Pound.		Values in 1913 in per cent. of those in 1912.
	1912.	1913.	
Nitrogen,			
In nitrates,	16½	18½	112.1
In ammonium salts,	16½	18½	112.1
In dry and fine ground fish and blood,	22	20	90.9
In fine bone and tankage and mixed fertilizers,	19	19	100.0
In coarse bone and tankage,	15	15	100.0
Phosphoric Acid:			
Water soluble,	4½	4½	100.0
Citrate soluble,	4	4	100.0
In fine ground bone and tankage,	4	4	100.0
In coarse bone and tankage,	3½	3½	100.0
In mixed fertilizers, insoluble,	2	2	100.0
Potash:			
In forms free from muriate,	5¼	5¼	100.0
As muriate,	4¼	4¼	100.0

Valuations in Pennsylvania.

For reasons stated on the previous page, the New England schedule has been followed in the case of mixed fertilizers and dissolved bones.

In the case of the dissolved rocks, the wholesale prices of raw materials used in their manufacture and of the available phosphoric acid itself, having shown no material change, the values used in the Pennsylvania schedule for 1912 are continued for use during the present year.

With respect to the potash and nitrate salts, the experience of recent years has shown a growing increase in the proportion of the official samples that represent direct cash purchases in large quantities. The result has been that the commercial valuations, based upon the conditions and costs of sale in small quantities, through local agents and on time, came to be, in a large fraction of the cases represented by these salts whose analyses are reported in the miscellaneous group, strikingly higher than the selling prices quoted. *For this reason, it has appeared needful to proceed, hereafter, upon the assumption that all potash and nitrate salts sold unmixed as such, have been purchased at what an virtually jobbers' prices plus freight, and to adopt corresponding pound values. In the case, however, of potash and nitrogen in mixed fertilizers, the computation will be made as heretofore, upon the assumed basis of sale on time, in small quantities and* through local dealers. . . . . .

Buyers who are interested in the comparative jobbing prices of other materials, will find the data in the preceding pages.

The entire schedule adopted for use in this State is presented in the following table.

Pennsylvania Schedule of Values for Fertilizer Ingredients, 1913.

	Cents Per Pound.
Nitrogen:	
In ammonia salts,	18½
In nitrates,	18½
In meat, dried blood and mixed fertilizers,	19
In fine ground bone and tankage,	17
In coarse bone and tankage,	15
Phosphoric Acid:	
Available, in bone fertilizers,	4¼
Available, in rock fertilizers,	3
Insoluble in ammonium citrate, in bone fertilizers,	2
Insoluble in ammonium citrate, in rock fertilizers,	1½
In fine bone, tankage and fish,	3½
In coarse bone and tankage,	2½
Potash:	
In high grade sulphate or forms free from muriate,	5¼
As muriate,	4¼

Potash in excess of that equivalent to the chlorin present, will be valued as sulphate, and the remainder as muriate. The analytical tables frequently show little or no potash reported as sulphate, although the full percentage guaranteed is reported present ,and although the manufacturer has guaranteed that it was introduced as sulphate. This discrepancy between analytical report and guaranty may be due to the rule of practice stated in the first sentence of this paragraph, and not to any act of bad faith on the part of the manufacturer. The rule of practice is adopted chiefly for the reason that plants injured, like tobacco and sometimes potatoes, by an excess of chlorin, is injured equally, whether the chlorin be introduced as muriate of potash, as common salt, or as magnesium chloride. At present prices for the two potash salts, muriate and sulphate, the only weightly reason for introducing the more costly sulphate, is to insure the purchaser of tobacco and potato fertilizers against possible injury by chlorin. Under our system of valuation, the manufacturer must exclude chlorin from every source to gain the valuation advantage from his use of sulphate of potash.

In certain cases where specific claim is made by the manufacturer that potash has been added as carbonate, potash in excess of that equivalent to soluble chlorides and soluble sulphates will be valued as carbonate.

Nitrogen in mixed fertilizers will be valued as derived from the best sources of organic nitrogen, unless clear evidence to the contrary is obtained.

Phosphoric acid in mixed fertilizers is valued at bone phosphoric acid prices, unless clearly found to be derived from rock phosphate.

Bone is sifted into two grades of fineness: Fine, less than 1-50 inch in diameter; coarse, over 1-50 inch in diameter.

The result obtained by the use of this schedule does not cover the items of mixing, bagging, freight and agents' commission. To cover these, allowances are made as follows:

For freight, an allowance of $2.00 per ton on all fertilizers.

For bagging, an allowance of $1.00 per ton on all fertilizers, except when sold in original packages.

For mixing, an allowance of $1.00 per ton on complete fertilizers and rock-and-potash goods.

For agents' commission, an allowance of 20 per cent. is added to the cash value of the goods ready for shipment.

FERTILIZER ANALYSES JANUARY 1, TO AUGUST 1, 1913.

Since January 1, 1913, there have been received from authorized sampling agents two thousand two hundred and thirty-three fertilizer samples, of which seven hundred and sixty-nine were subjected to analysis. Preference is given to those which have not been recently analyzed. In cases where two or more samples representing the same brand were received, equal portions from several samples were united, and the composite sample was subjected to analysis.

The samples analyzed group themselves as follows: 531 complete fertilizers, furnishing phosphoric acid, potash and nitrogen; 4 dissolved bones, furnishing phosphoric acid and nitrogen; 140 rock-and potash fertilizers, furnishing phosphoric acid and potash, 43 acidulated rock phosphates, furnishing phosphoric acid only; 32 ground bones, furnishing phosphoric acid and nitrogen, and 19 miscellaneous samples, which group includes substances not properly classified under the foregoing heads.

The determinations to which a complete fertilizer is subjected are as follows: (1) Moisture, useful for the comparison of analyses, for indication of dry condition and fitness for drilling, and also of the conditions under which the fertilizer was kept in the warehouse. (2) Phosphoric acid—total and insoluble; that is, that portion not soluble in water nor in warm ammonium citrate solution (a solution supposed to represent the action of plant roots upon the fertilizer), which is assumed to have little immediate food value. By difference, it is easy to compute the so-called "available" phosphoric acid. (3) Potash soluble in water—most of that present in green sand marl and crushed minerals, and even some of that present in vegetable materials such as cotton-seed meal, not being included because insoluble in water ever after long boiling. (4) Nitrogen—This element is determined by a method which simply accounts for all present, without distinguishing between the quantities present in the several forms of ammonium salts, nitrates or organic matter. (5) Chlorin—this determination is made to afford a basis for estimating the proportion of the potash that is present as chlorid or muriate, the cheaper source. The computation is made on the assumption that the chlorin present, unless in excess, has been introduced in the form of muriate of potash; but doubtless there are occasional exceptions to this rule. One part of chlorin combines with 1.326 parts of potash to form the pure muriate; knowing the chlorin, it is, therefore, easy to compute the potash equivalent thereto. (7) In the case of ground bone, the state

of sub-division is determined by sifting through accurately made sieves; the cost of preparation and especially the promptness of action of bone in the soil depend very largely on the fineness of its particles, the finer being much more quickly useful to the plant.

The preceding paragraph sets forth the nature of the examinations given to the several classes of fertilizers under the laws in force prior to the present year. The legislation of 1909 has made needful, however, some additional tests. Section 4, of the Act of May 1, 1909, prohibits the sale of "pulverized leather, hair, ground hoof, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact." All nitrogenous fertilizers have, therefore, been submitted to a careful microscopic examination, at the time of preparing the sample for analysis, to detect the presence of the tissues characteristic of the several materials above named. The act of April 23, 1909, makes it unlawful to use the word "bone" in connection with, or as part of the name of any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone. All fertilizers in whose name the word "bone" appears, were therefore examined by microscopic and chemical methods to determine, so far as possible with present knowledge, the nature of the ingredient or ingredients supplying the phosphoric acid. It is a fact, however, well known to fertilizer manufacturers and which should be equally understood by the consumer, that it is, in certain cases, practically impossible to determine the source of the phosphoric acid by an examination of the finished fertilizer. The microscope shows clearly the structure of raw bone, but does not make it possible to discriminate between thoroughly acidulated bone and acidulated rock. The ratio of nitrogen to phosphoric acid in a raw bone—and only such bone as has not been deprived of any considerable proportion of its nitrogenous material by some manufacturing process can properly be called "pure animal bone"—is about 1:8; in cases where the ratio of nitrogen to phosphoric acid exceeds 8, it is clear that part, at least, of the phosphoric acid has been supplied by something else than pure animal bone; but, inasmuch as nitrogen may have been introduced in some material other than bone and no longer detectible by the microscope, the presence of nitrogen and phosphoric acid in the proportions corresponding to those of bone is not proof positive that they have been supplied by bone. Finally, the differences in the iron and silica content of bone and rock respectively, afford means of distinction useful in some cases; the usefulness of this distinction is limited, however, by the facts that kitchen bone frequently contains earthly impurities rich in iron and silica, and that earthly fillers can legally be used in fertilizers and are in fact considerably used therein both

as "make-weights" and as "conditioners," or materials introduced to improve the drilling qualities of the goods. The fact that the phosphoric acid in bone and rock are identical in character is probably so well known as to require no detailed consideration in this connection.

The law having required the manufacturer to guarantee the amount of certain valuable ingredients present in any brand he may put upon the market, chemical analysis in employed to verify the guaranties stamped upon the fertilizer sacks. It has, therefore, been deemed desirable in this report to enter the guaranty filed by the manufacturer in the office of the Secretary of Agriculture, in such connection with the analytical results that the two may be compared. An unfortunate practice has grown up among manufacturers of so wording the guaranty that it seems to declare the presence in goods of an amount of valuable constituent ranging from a certain minimum to a much higher maximum; thus, "Potash, 2 to 4 per cent." is a guaranty not infrequently given. In reality, the sole guaranty is for 2 per cent. The guaranteed amounts given for each brand in the following tables, are copied from the guaranties filed by the maker of the goods with the Secretary of Agriculture, the lowest figure given for any constituent being considered to be the amount guaranteed. For compactness and because no essentially important fact is suppressed thereby, the guaranties for soluble and reverted phosphoric acid have not been given separately, but are combined into a single guaranty for available phosphoric acid; in cases where the maker's guaranty does not specifically mention available phosphoric acid, the sum of lowest figures given by him for soluble and reverted phosphoric acid is used. The law of 1879 allowed the maker to express his guaranty for nitrogen either in terms of that element or in terms of the ammonia equivalent thereto; since ammonia is composed of three parts of hydrogen and fourteen parts of nitrogen it is a very simple matter to calculate the amount of one, when the amount of the other is given; the amount of nitrogen multiplied by 1.214 will give the corresponding amount of ammonia, and the amount of ammonia multiplied by 0.824 will give the corresponding amount of nitrogen. In these tables, the expression is in terms of nitrogen. The laws of 1901 and 1909 abolished the alternative and required that the quantity shall be given in terms of nitrogen.

Many manufacturers after complying with the terms of the law, insert additional items in their guaranties, often with the result of misleading or confusing the buyer; the latter will do well to give heed to those items only that are given as the law requires and that are presented in these tables:

A summary of the analyses made this season is presented as follows:

SUMMARY OF ANALYSES MADE THIS SEASON.

	Complete.	Rock and potash.	Dissolved bone.	Dissolved rock.	Ground bone.
Number of analyses,	531	140	4	43	32
Moisture, per cent.,	7.87	8.26	7.35	7.98	5.96
Phosphoric acid:					
Total, per cent.,	9.71	10.68	14.63	15.85	22.14
Available, per cent.,	7.37	9.83	10.52	14.82	.....
Insoluble, per cent.,	1.60	.85	4.11	1.03	.....
Potash, per cent.,	5.41	4.62	.....	.....	.....
Nitrogen, per cent.,	1.61	.....	1.26	.....	3.36
Mechanical analyses of bone:					
Fine,	.....	.....	.....	.....	56.00
Coarse,	.....	.....	.....	.....	44.00
Commercial valuation,*	26.44	16.52	21.63	14.25	32.50
Average selling price,*	25.08	16.75	18.55	13.96	33.86

*Dollars per ton.

"For the purpose of indicating more specifically to the eye, cases deficient in guarantee, an asterisk has been affixed in the analytical tables where the ingredient has been found less in quantity than the manufacturer guaranteed. Too great emphasis should not be placed upon very slight deficiencies, because very slight imperfections in mixing and slight variations in analysis are practically unavoidable. The asterisk has been used therefore, only in cases where the deficiencies amount to 0.2 per cent, or more, except where nitrogen has been guaranteed in amounts not higher than 1.0 per cent., in which case an asterisk has been affixed where the deficiency amounts to 0.1 per cent. or more."

The cases of departure of goods from their guaranteed composition observed this season, including only those cases in which it amounted to two-tenths per cent. or more, were as follows:

Summary of Instances of Deficiency from Guaranty.

	Complete fertilizer.	Rock and potash.	Dissolved bone.	Dissolved rock.	Ground bone.
Deficient in four constituents,	0	0	0	0	0
Deficient in three constituents,	8	.....	.....	.....	.....
Deficient in two constituents,	29	8	1	3	1
Deficient in one constituent,	135	29	1	6	7
Total number of samples in which deficiencies occur,	172	37	2	9	8

The cases of deficiency noted during the past eleven seasons in the composition of goods as compared with their guaranties, expressed in percentage of the total number of goods of each class analyzed, are as follows:

Percentage of deficiency, 1908-1913.

	Spring, 1908.	Fall, 1908.	Spring, 1909.	Fall, 1909.	Spring, 1910.	Fall, 1910.	Spring, 1911.	Fall, 1911.	Spring, 1912.	Spring, 1913.
Complete fertilizers,	40.0	†40.0	39.5	46.3	28.9	35.9	45.1	46.9	39.0	32.3
Dissolved bone,	‡50.0	16.6	25.0	*	37.5	25.0	16.6	100.00	50.0	50.0
Rock and potash,	39.0	38.8	36.2	30.4	25.2	37.0	27.1	43.4	33.6	26.4
Dissolved rock,	21.2	28.5	33.3	19.5	4.3	6.3	5.9	11.9	12.5	20.9
Ground bone,	38.0	40.0	20.8	38.4	29.17	27.6	47.8	20.0	29.2	25.0
All classes except miscellaneous,	38.8	38.3	37.6	39.6	26.5	33.5	38.7	46.0	36.0	30.4

*Only two samples analyzed for which no guarantees are reported.
†Only three samples analyzed.
‡Only four samples analyzed.

A comparison of the average composition of all samples of complete fertilizers for which guaranties are recorded with the average of the corresponding guaranties, for several seasons past, including those of this season, follows:

Average Composition and Guaranty Compared.

	Average composition. Per cent.	Average guaranty. Per cent.
Spring, 1908.		
Phosphoric acid:		
Total,	10.07	8.91
Available,	8.29	7.61
Potash,	5.04	4.51
Nitrogen,	1.64	1.59
Fall, 1908.		
Phosphoric acid:		
Total,	10.29	9.31
Available,	8.29	7.96
Potash,	3.24	2.94
Nitrogen,	1.24	1.23
Spring, 1909.		
Phosphoric acid:		
Total,	9.83	8.98
Available,	8.07	7.66
Potash,	5.07	4.80
Nitrogen,	1.67	1.00
Fall, 1909.		
Phosphoric acid:		
Total,	10.13	9.34
Available,	8.27	8.08
Nitrogen,	1.33	1.26
Potash,	3.41	3.12

Average Composition and Guaranty Compared—Continued.

	Average composition. Per cent.	Average guaranty. Per cent.
Spring, 1910.		
Phosphoric acid:		
Total,	9.80	8.80
Available,	8.26	7.62
Potash,	5.20	4.68
Nitrogen,	1.63	1.60
Fall, 1910.		
Phosphoric acid:		
Total,	9.72	8.80
Available,	8.26	7.62
Potash,	5.20	4.68
Nitrogen,	1.63	1.60
Spring, 1911.		
Phosphoric acid:		
Total,	9.86	8.96
Available,	8.31	7.86
Potash,	4.97	4.65
Nitrogen,	1.53	1.54
Fall, 1911.		
Phosphoric acid:		
Total,	9.59	9.09
Available,	8.20	7.87
Potash,	3.63	.339
Nitrogen,	1.12	1.19
Spring, 1912.		
Phosphoric acid:		
Total,	9.51	8.82
Available,	8.09	7.78
Potash,	5.34	5.05
Nitrogen,	1.56	1.58
Spring, 1913.		
Phosphoric acid:		
Total,	9.71	8.92
Available,	8.11	7.37
Potash,	5.41	5.17
Nitrogen,	1.61	1.62

It is of interest to note how closely the series of valuations based upon the wholesale price of raw materials in the principal markets during the most important buying season and upon certain average allowances for expenses and profits on the part of the mixer and jobber, coincides with the retail prices later ascertained. A comparison for several seasons past is given below:

Comparison of Selling Price and Valuation, 1908-1913.

	Selling price.	Valuation.	Excess of valuation over selling price.
Complete fertilizers:			
1908, Spring,	25.69	26.23	.54
Fall,	22.34	23.88	1.54
1909, Spring,	24.88	25.31	.43
Fall,	22.07	22.25	.14
1910, Spring,	25.26	26.63	1.43
Fall,	21.76	22.24	.48
1911, Spring,	24.97	25.95	.98
Fall,	21.73	22.33	.61
1912, Spring,	27.64	27.24	—.40
1913, Spring,	25.08	26.44	1.36
Dissolved bone:			
1908, Spring,	21.11	23.09	1.98
Fall,	22.48	26.05	3.57
1909, Spring,	22.25	21.57	—.68
Fall,	24.50	22.85	—1.65
1910, Spring,	22.17	21.47	—.70
Fall,	25.80	25.70	—.10
1911, Spring,	20.33	23.82	3.49
Fall,	24.88	21.51	—3.37
1912, Spring,	20.94	18.92	2.82
1913, Spring,	18.55	21.63	3.08
Rock and potash:			
1908, Spring,	16.86	16.24	—.62
Fall,	16.43	16.17	—.26
1909, Spring,	16.98	15.94	1.04
Fall,	16.10	15.50	—.60
1910, Spring,	17.16	16.08	—1.08
Fall,	16.38	16.34	—.04
1911, Spring,	17.05	15.99	—1.06
Fall,	16.25	16.07	—.18
1912, Spring,	18.17	16.26	—1.91
1913, Spring,	16.75	16.52	—.23
Dissolved rock:			
1908, Spring,	14.72	14.92	.20
Fall,	14.31	14.86	.55
1909, Spring,	14.76	13.62	—1.14
Fall,	13.86	14.02	.16
1910, Spring,	14.56	14.00	—.56
Fall,	14.01	14.15	.14
1911, Spring,	15.83	14.26	—1.58
Fall,	14.00	13.78	.22
1912, Spring,	14.69	14.20	—.49
1913, Spring,	13.96	14.25	.29
Ground bone:			
1908, Spring,	29.04	28.96	—.08
Fall,	28.18	17.90	—1.28
1909, Spring,	30.70	30.28	—.42
Fall,	29.39	28.71	—.68
1910, Spring,	30.19	30.27	.08
Fall,	29.98	31.10	1.12
1911, Spring,	30.93	31.47	.54
Fall,	31.17	31.18	.01
1912, Spring,	32.81	33.26	.45
1913, Spring,	33.86	32.50	—1.36

MATERIALS USED IN FERTILIZERS.

The microscopic examination of the nitrogenous fertilizers for leather, hair, and other materials the use of which without notice is prohibited by the Act of May 1, 1909, revealed in no case such quantity of any of these substances as might not fairly be regarded as an accidental trace. No instance has been reported by the sampling agents in which a declaration of the presence of such material has been made. It is, however, a matter of quite general knowledge that substances of this kind are being largely used in fertilizer mixtures; but, in most cases at least, only after such treatment as results in the destruction of the characteristic tissues and, at the same time, wholly or partly in that of the organic compounds originally present.

In conformity with the requirements of the Act of April 23, 1909, many firms dropped from the brand names of goods manufactured by them the word "bone" hitherto forming part of said names. Where such change in name appears, it may be taken as evidence that the phosphoric acid is derived, at least in part, from something else than bone.

ORGANIZATION OF THE WORK.

In conclusion, I would state that the work of the season has been performed under my direction, as follows:

The nitrogen determinations by W. Thomas, B. S.; those of total phosphoric acid by P. W. Clemmer, B. S.; of insoluble phosphoric acid by H. D. Edmiston and F. N. Crawford, B. S.; of potash by E. S. Erb, M. S.; computations by Miss Verna Bryce, and chlorin, by Charles Kern; and the preparation of samples, care of records, and the detail of the compilation of this bulletin, by G. C. Given, M. S. To these trained and experienced assistants, my acknowledgments are due for loyal and efficient service.

COMPLETE

Sample number.	Manufactnrer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	ALLENTOWN MANUFACTURING CO., ALLENTOWN, PA.		
554	High Grade Potato Phosphate, ...	Wm. H. Yoder, Trexlertown, ...	7.65
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.		
1112	†Complete Manure with 10% Potash, ...	Sam'l H. Wolf, Stevens, ...	7.35
1252		E. S. Zehner, Tamaqua, ...	
		W. V. Shirk, Oakland Mills, ...	
199	†High Grade Potash Compound, ...	Jno. P. Jones Hdwe. Co., Summerville.	10.00
1406			
422		Jno. B. Buckman, Newtown, ...	
159	†Special Potash Mixture, ...	Linesville Coal, Lime and Cement Co., Linesville.	9.18
507		Jno. H. Reed, Cressona, ...	
1867	Superior Componnd, ...	Paxton Flour and Feed Co., Bowmansdale.	5.75
421	†Top Dresser for Grass, ...	Jno. B. Buckman, Newtown, ...	7.35
838		J. B. Curry Est., Swatara, ...	
456	†Bradley's Bay State, ...	A. W. Sandt, Martins Creek, ...	5.30
1497		Chas. McDowell, Mansfield, ...	
1065		S. K. Smith & Son, New Bethlehem,	
1050	†Bradley's B. D. Guano, ...	A. F. Gault, Bentleyville, ...	9.45
1121		J. S. Cole, Milleville, ...	
1069	†Bradley's B. D. Sea Fowl Gnano, ...	Anderson Hdwe. Co., New Bethlehem.	8.90
1749		Geo. Ifft & Sons, Evans City, ...	
1614		Frank Hagenbach, Danville, R. No. 4.	
1039	†Bradley's Greyhound Fertilizer, ...	J. G. Leighton, Tunkhannock, ...	6.98
1825		Paxton Flour and Feed Co., Bowmansdale.	
		J. G. Leighton, Tunkhannock, ...	
1036	†Bradley's King Philip, ...	Paxton Flour and Feed Co., Bowmansdale.	12.25
1824			
675	Bradley's Maize Producer, ...	Wysox Coal and Hay Co., Wysox, ..	8.23
1750	Bradley's New Method Fertilizer, ...	Geo. Ifft & Sous, Evans City, ...	7.65
1464	Bradley's New Rival Fertilizer, ...	G. R. Andrews, Enon Valley, ...	5.90
1051	†Bradley's Niagara Phosphate, ...	A. F. Ganlt, Bentleyville, ...	8.43
1646		Punxsutawney Planing Mill Co., Punxsutawney.	
830	Bradley's Potato and Vegetable Manure, ..	Benj. H. Gibson, Hydetown, ...	8.95
2225	Bradley's Superior Compound, ...	Otto Braun, Germania, ...	11.25
1353	Bradley's Tobacco Manure Sulphate, ...	G. B. Murphy, Red Lion, R. No. 1,	6.65
1717	Bradley's Unicorn, ...	Deerfield Milling Co., Knoxville, ...	8.00
664	†Bradley's Weymouth Staple Phosphate,	R. C. King, Ulster, ...	7.73
1122		J. S. Cole, Millville, ...	
1217		W. B. Winey, Middleburg, ...	
569	†Canton Chemical Co's CCC Special Com-	H. L. Orr, Tyrone, ...	9.15
1441	ponnd.	King Bros., Uniontown, ...	
354		T. J. Jacobs, Somerfield, ...	
245	†Canton Chemical Baker's Special Wheat,	H. L. Lindner, Milton, ...	7.65
425	Corn and Grass Mixture.	Jno. B. Buckman, Newtown, ...	
1443	†Canton Chemical Baker's Standard High	King Bros., Uniontown, ...	7.65
1577	Grade Guano.	J. P. Herman, Gordonville, ...	
655		F. L. Kehres & Son, Rehuck, ...	
510	†Canton Chemical Eagle Phosphate, ...	Thomas Kramer, Schuylkill Haven, ..	9.25
1536		F. S. Lewis, Quakertown, ...	
1732	Canton Chemical Harrow Brand Crop Grower.	Wm. Gates Estate, Kittanning, ...	9.10
424		Jno. B. Buckman, Newtown, ...	
244	†Canton Chemical Potato Manure, ...	H. L. Lindner, Milton, ...	8.18
544		Geo. F. Hartman, Centre Valley, ...	
423		Jno. B. Buckman, Newtown, ...	
246	†Canton Chemical Resurgam Gnano, ...	H. L. Lindner, Milton, ...	10.03
1575		J. P. Herman, Gordonville, ...	
2075	Crocker's Ammoniated Superphosphate, ...	J. W. Hartwell, New Wilmington, ..	7.03
464	Crocker's Century Fertilizer, ...	Peter Hanghenbach, Nazareth, ...	5.00
1470	Crocker's Colonial Fertilizer, ...	J. E. Waters, Jamestown, ...	6.33
607	†Crocker's Complete Manure, ...	Honck & Henry, New Berlinville, ..	10.53
162		Linesville Coal, Lime and Cement Co., Linesville.	
1054		Bentleyville Hdw. Co., Bentleyville,	

†Composite sample.

FERTILIZERS.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
5.22	4.00	2.11	*7.33	8.00	9.48	.....	*9.48	10.00	1.61	1.50	27.75	28.00	554
6.89	6.00	.98	7.87	7.00	9.08	.....	*9.08	10.00	*2.68	3.29	33.50	35.00 33.50	1112 1252
8.21	8.00	1.62	9.83	9.00	10.02	.....	10.02	10.00	1.57	1.65	30.85	..... 24.00	199 1406
8.84	9.00	1.46	10.30	10.00	7.54	.....	7.54	7.00	.86	.82	25.70	28.00 26.00 23.00	422 159 507
8.50	8.00	1.56	10.06	9.00	4.31	.....	4.31	4.00	1.83	1.65	26.65	24.00	1867
8.68	8.00	.82	9.50	9.00	5.71	.....	5.71	5.00	*4.66	4.94	40.69	42.00	421
5.29	5.00	1.34	6.63	6.00	10.88	.....	10.88	10.00	1.69	1.65	29.34	36.00 29.00 28.00	838 456 1497
8.27	8.00	1.48	9.75	9.00	4.34	.....	4.34	4.00	.93	.82	22.08	25.00 24.50 18.00	1050 1065 1121
7.89	8.00	1.99	9.88	9.00	2.19	.....	2.19	1.50	2.03	2.06	25.02	25.00 25.00	1069 1749
6.73	6.00	1.21	7.94	7.00	11.18	.....	11.18	10.00	*3.01	3.29	36.97	..... 35.00 35.00	1614 1039 1825
8.20	8.00	1.72	9.92	9.00	2.77	.....	2.77	2.00	1.15	1.03	21.63	22.00 19.00	1036 1824
*6.86	8.00	3.55	10.41	9.00	7.07	.....	7.07	6.00	2.21	2.06	30.31	28.00	675
8.22	8.00	.65	8.87	9.00	2.32	.....	2.32	2.00	.83	.82	19.30	22.00	1750
6.69	6.00	1.42	8.11	7.00	5.92	.....	5.92	5.00	1.51	1.23	24.78	25.00	1464
6.86	7.00	1.49	8.35	8.00	1.44	.....	1.44	1.00	.95	.82	17.91	21.00 20.00	1051 1646
7.95	8.00	1.55	9.50	9.00	5.30	1.12	*6.42	7.00	*2.45	3.29	31.23	38.00	830
8.66	*9.00	1.07	*9.73	10.00	6.37	.....	*6.37	7.00	1.23	.82	25.96	28.00	2225
3.22	3.00	.35	*3.57	4.00	.66	5.64	6.30	5.50	*4.22	4.53	34.76	35.00	1353
8.50	8.00	1.33	9.83	9.00	2.81	.....	2.81	2.00	1.75	1.65	24.56	21.00	1717
8.15	8.00	1.83	9.98	9.00	10.57	.....	10.57	10.00	1.57	1.65	31.44	30.00 26.00	664 1122
8.93	8.00	1.40	10.33	9.00	6.04	.....	6.04	6.00	2.14	2.06	30.18	28.00 30.00 30.00	1217 569 1441
9.00	9.00	1.56	10.56	10.00	2.37	.....	2.37	2.00	.87	.82	20.60	24.00 18.00 24.00	354 245 425
8.02	8.00	1.72	9.74	9.00	3.18	.....	3.18	3.00	2.16	2.06	26.49	30.00 25.09	1443 1577
7.70	7.00	1.33	9.03	8.00	1.34	.....	1.34	1.00	.85	.82	18.16	17.50 18.00 20.00	655 510 1536
8.16	8.00	1.40	9.56	9.00	2.25	.....	2.25	1.00	.91	.82	19.78	19.00	1732
6.86	6.00	1.44	8.30	7.00	5.49	.....	5.49	5.00	1.28	1.23	23.62	26.00 22.00 23.00	424 244 544
8.38	8.00	1.53	9.91	9.00	4.54	.....	4.54	4.00	.87	.82	22.18	28.00 19.00 23.50	423 246 1575
8.92	9.00	1.55	10.47	10.00	4.11	.....	4.11	2.00	*1.70	2.47	26.17	38.00	2075
5.30	5.00	1.14	6.44	6.00	10.02	.....	10.02	10.00	2.05	1.65	29.91	25.00	464
6.52	6.00	1.39	7.91	7.00	12.54	.....	12.54	10.00	2.69	2.47	36.78	32.00	1470
8.09	8.00	1.34	9.43	9.00	4.19	.....	4.19	4.00	.96	.82	21.93	22.00 24.00 26.00	607 162 1054

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
1052	†Crocker's General Crop Fertilizer,	Bentleyville Hdw. Co., Bentleyville,	9.53
813		W. P. Rouse & Son, North East,	
1725		J. L. Kulp, Indiana,	
2134	Crocker's Harvest Jewel Fertilizer,	Hall, Kaul & Hyde, St. Marys,	9.28
871	†Crocker's High Grade Potato Fertilizer,	N. R. Yost, Myerstown,	6.93
807		L. F. Haag, Girard,	
1666		Ditz & Mooney Hdw. Co., Clarion,	
182	Crocker's High Grade Special,	L. F. Haag, Girard,	8.75
2155	Crocker's Nobsque Guano,	O. and W. R. Davis, Kane,	3.38
1047	†Crocker's Potato, Hop and Tobacco Fertilizer.	Bentleyville Hdw. Co., Bentleyville,	9.05
1799		W. H. Ryland, Cressona, R. D.,	
160	Crocker's Root and Vine,	Linesville Coal, Lime and Cement Co., Linesville.	10.23
606	Crocker's Universal Grain Grower,	Houck & Henry, New Berlinville,	11.63
1471	Crocker's Wheat and Corn Fertilizer,	J. E. Watters, Jamestown,	9.40
1751	†Detrick's Corn and Oats Fertilizer,	Enos Barkey, Evans City,	11.23
1831		B. F. Horting, Newport,	
5	†Detrick's Royal Crop Grower,	Jas. Shoacher, Newville,	10.69
28		J. H. McMurray, McMurray,	
673	East India Black Hawk Fertilizer,	G. E. Besch, E. Smithfield,	10.20
1029	East India Economizer Phosphate,	B. J. Dougherty, Meshoppen,	9.05
1032	East India Fruit Grower's Friend,	B. J. Dougherty, Meshoppen,	5.83
1644	†East India Hawkeye Fertilizer,	Theo. Gerhart, Gilbert,	8.78
1167		Harrington & Wilson, Montrose,	
1778		A. W. Heller, Wapwallopen,	
1642	East India Improved Compound,	Theo. Gerhart, Gilbert,	4.75
1031	†East India Pilgrim Fertilizer,	B. J. Dougherty, Meshoppen,	9.00
1643		Theo. Gerhart, Gilbert,	
674	East India 10% Vegetable and Potato,	G. E. Beach, E. Smithfield,	8.60
1166	East India Tiger Brand,	Harrington & Wilson, Montrose,	7.78
93	†Great Eastern General,	Wm. J. Johnson, Sinking Spring,	9.15
1386		J. H. Pricky, Rockhill Furnace,	
92	†Great Eastern Northern Corn Special,	Wm. J. Johnson, Sinking Spring,	8.48
992		Julius Long, Danboro,	
89	†Great Eastern Vegetable Vine and Tobacco Fertilizer.	Wm. J. Johnson, Sinking Spring,	8.35
1258		Wm. K. Goss, Dallas,	
119	†Great Eastern High Grade Cabbage Grower.	William Biller, Patton, R. D. No. 1,	9.53
91		Wm. J. Johnson Sinking Spring,	
993		Julius Long, Danboro,	
1341	Lazaretto Special Ammoniated Compound,	D. F. Breneman, Springvale,	9.98
1826	Maryland O. K. Ammoniated Fertilizer,	Paxton Flour and Feed Co., Bowmansdale.	8.83
1866	Maryland Special Compound for Potatoes and Tobacco.	Paxton Flour and Feed Co., Bowmansdale.	6.40
552	†Michigan Carbon Works General Crop Fertilizer.	Elmer H. Carl, Coopersburg,	9.33
827		Davis & Hide, Spartansburg,	
756	†Milsom's Buffalo Guano,	Keil Hdw. Co., Sharpsburg,	9.83
136		Jas. Jacobs, York Springs,	
1654		McCauley, McKay & Co., Brockwayville.	
1793	Milsom's Corn Fertilizer,	D. R. Stein, Orwigsburg,	6.75
1728	Milsom's Crown Phosphate,	Leechburg Hdw. Co., Leechburg,	8.33
1407	Milsom's Imperial Phosphate,	Grange, A. F. Beck, Sec'y, Hornstown.	12.65
2241	Milsom's Potato and Truck Grower,	R. C. Sharp, Pittsburgh,	8.25
1744	†Milsom's Wheat, Oats and Barley,	Imbrie Bros., Petrolia,	9.10
595		Morris Reeser, West Leesport,	
1792		D. R. Stein, Orwigsburg,	
979	Moro-Phillips C. and G. Complete Fertilizer.	Jas. W. Butz, Palm,	10.45
1788	†Moro-Phillips Farmer's Potato Mixture,	S. G. Smith, Orwigsburg,	8.08
1882		E. Kinsloe, Newton Hamilton,	
2243	Moro-Phillips Special Compound,	Ira Doan, Richboro,	10.80
1820	Moro-Phillips Standard Guano,	W. M. Woods, Huntsdale,	9.78
1253	†Moro-Phillips 10% Potato and Vegetable Manure.	E. S. Zehner, Tamaqua,	7.50
1113		Eli F. Hornberger, Ephrata, R. D. 3,	
1819		W. M. Woods, Huntsdale,	
872	†North Western Diamond Potash Mixture,	N. R. Yost, Myerstown,	8.48
466		Jno. Kunkle, Bath,	
1458		C. D. Duffee, Oil City,	
1637	North Western Farmer's Standard,	Chas. Kern, Little Gap,	6.00
994	North Western Garden Manure,	L. E. Wilcox, Danboro,	5.63

†Composite sample.

LIZERS—Continued

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.62	7.00	1.28	9.90	8.00	3.87	.....	3.87	1.00	.84	.82	21.60	{22.00 18.50 19.00	1052 813 1725
7.82	8.00	1.95	9.77	9.00	2.34	.....	2.34	2.00	1.69	1.65	23.44	26.00	2134
6.45	6.00	1.50	7.95	7.00	8.00	1.65	*9.65	10.00	*2.93	3.29	39.94	{32.00 38.50 40.00	871 807 1666
7.93	8.00	1.44	9.37	9.00	4.60	.....	4.60	4.00	1.79	1.65	26.08	28.00	182
7.93	8.00	1.59	9.52	9.00	2.04	.....	2.04	2.00	1.05	1.03	20.13	27.00	2155
8.36	8.00	1.62	9.98	9.00	3.36	.....	3.36	3.00	*1.74	2.06	25.1±	{28.00 25.00	1047 1799
9.05	9.00	1.36	10.41	10.00	7.53	.....	7.53	7.00	.84	.82	25.86	27.00	160
8.74	8.00	1.57	10.31	9.00	2.33	.....	2.33	2.00	.86	.82	20.35	20.00	606
*7.64	8.00	1.99	9.63	9.00	2.58	.....	2.58	1.50	2.12	2.06	25.39	23.50	1471
9.05	9.00	1.53	10.58	10.00	3.44	.....	3.44	3.00	.85	.82	21.76	{13.06 17.75	1751 1831
8.45	8.00	1.72	10.17	9.00	2.62	.....	2.62	2.00	1.60	1.65	23.78	{19.35 25.00	5 28
*8.21	9.00	3.10	11.31	10.00	2.75	.....	2.75	2.00	2.91	2.47	30.28	28.00	673
8.05	8.00	2.19	10.24	9.00	2.62	.....	2.62	2.00	1.15	.82	21.56	20.00	1029
9.30	9.00	2.06	11.36	10.00	4.40	2.89	7.29	7.00	.79	.82	26.54	26.00	1032
6.90	7.00	2.41	9.31	8.00	1.62	.....	1.62	1.00	1.21	.82	19.70	{18.00 22.00 18.00	1644 1167 1778
5.51	5.00	.71	6.22	6.00	11.53	.....	11.53	10.00	1.60	1.65	29.43	28.00	1642
7.84	8.00	1.69	9.53	9.00	4.60	.....	4.60	4.00	.99	.82	22.47	{22.00 28.00	1031 1643
8.06	8.00	2.17	10.23	9.00	9.20	2.16	11.36	10.00	1.59	1.65	33.09	30.00	674
6.24	6.00	1.95	8.19	7.00	6.80	.....	6.80	5.00	1.18	1.23	24.12	26.00	1166
8.85	8.00	1.12	9.97	9.00	4.46	.....	4.46	4.00	.88	.82	22.59	{20.00 21.00	93 1386
9.80	9.00	1.10	10.90	10.00	2.70	.....	2.70	2.00	2.69	2.47	30.00	{25.50 24.50	92 992
8.51	8.00	1.43	9.94	9.00	3.67	.....	3.67	3.00	2.22	2.06	27.52	{24.00 25.00 23.00	189 1258 119
9.49	9.00	1.02	10.51	10.00	6.83	.....	6.83	7.00	.83	.82	25.44	{23.00 22.50	91 993
9.33	9.00	1.70	11.03	10.00	2.83	.....	2.83	3.00	*.80	1.03	21.31	19.00	1341
8.21	8.00	1.24	9.45	9.00	2.87	.....	2.87	2.00	.84	.82	20.14	18.00	1826
8.50	8.00	1.19	9.69	9.00	9.55	.....	*9.55	10.00	1.55	1.65	30.46	28.00	1866
8.19	8.00	1.21	9.40	9.00	4.35	.....	4.35	4.00	.73	.82	21.43	{21.00 22.00	552 827
8.69	8.00	1.57	10.26	9.00	4.60	.....	4.60	4.00	.86	.82	22.59	{25.00 21.30 22.00	756 136 1654
9.71	9.00	1.17	10.88	10.00	2.87	.....	2.87	2.00	2.54	2.47	29.41	27.00	1793
9.85	10.00	1.00	10.85	11.00	2.65	.....	2.65	2.00	.46	.....	16.60	20.00	1728
*11.51	12.00	.88	*12.39	13.00	4.43	.....	*4.43	5.00	.45	.....	18.50	.....	1407
7.77	8.00	2.08	9.85	9.00	10.33	.....	10.33	10.00	1.65	1.65	31.40	30.00	2241
8.41	8.00	1.83	10.24	9.00	2.33	.....	2.33	2.00	1.00	.82	20.82	{26.00 21.00 19.00	1744 595 1792
8.14	8.00	1.77	9.91	9.00	2.12	.....	2.12	2.00	.86	.82	19.58	19.00	979
6.82	6.00	1.19	8.01	7.00	5.36	.....	5.36	5.00	1.46	1.23	23.98	{26.00 25.00	1788 1882
8.48	8.00	.75	9.23	9.00	2.96	.....	*2.96	6.00	*1.07	2.06	21.24	30.00	2243
8.49	8.00	1.30	9.79	9.00	4.45	.....	4.45	4.00	.94	.82	22.57	18.50	1820
8.64	8.00	1.12	9.76	9.00	10.02	.....	10.02	10.00	1.62	1.65	31.24	{28.00 26.50 27.00	1253 1113 1819
7.85	8.00	1.60	9.45	9.00	2.00	8.87	10.87	10.00	1.66	1.65	33.88	{27.00 28.50 29.50	872 466 1458
6.18	6.00	1.66	7.84	7.00	5.88	.....	5.88	5.00	1.23	1.23	23.19	.....	1637
8.51	8.00	1.21	9.72	9.00	7.06	.16	7.22	7.00	*2.94	3.29	34.48	36.00	994

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
1812	North Western Earth Warmer Phosphate, ..	Berger Bros., Pine Grove, ...	3.65
1813	North Western Puritan Phosphate, ...	Berger Bros., Pine Grove, ...	5.65
1610	North Western Shawnee Phosphate, ...	H. F. Rittenhouse, Berwick, ...	3.28
667	†Packer's Union Animal Corn Fertilizer,	C. Gerauld, Milan, ...	12.06
120		Wm. Biller, Patton, R. D. 1, ...	
1776	†Packer's Union Potato Manure, ...	Sam Smith, Nescopeck, ...	10.55
118		Wm. Biller, Patton, R. D. 1, ...	
1968	†Packer's Union Universal Fertilizer, ...	S. A. Detrick, Milford, ...	6.45
239		Solomon Peck, Nittany, R. D. 1, ..	
122		Wm. Biller, Patton, R. D. 1, ...	
666		C. Gerauld, Milan, ...	
551	Quinnipiac Mohawk Fertilizer, ...	Elmer H. Carl, Coopersburg, ...	7.48
1786	Read's Leader Fertilizer, ...	S. G. Smith, Orwigsburg, ...	7.93
470	Read's Potash Compound, ...	Irwin H. Fisher, Nazareth, ...	7.48
1856	Reese's Ammoniated Phosphate Mixture, ..	L. C. Martin, Laysville, ...	9.78
991	Reese's Half and Half, ...	Benj. Hall, Danboro, ...	9.43
853	†Reese's Pilgrim Fertilizer, ...	A. G. Houtz, Myerstown, ...	8.53
1328		Milton Newman, Dover, ...	
840	Reese's Potato Manure, ...	J. B. Curry Estate, Swatara, ...	9.33
801	†Sharpless & Carpenter's Gilt Edge Potato and Tobacco Manure.	H. L. Linden, Milton, ...	8.15
529		L. F. Mosser, Mosserville, ...	
999		M. A. Kirby, Falsington, ...	
75	Sharpless & Carpenter's No. 2 for Grain and Grass.	L. A. Geiger, Joanna, ...	9.05
998	†Sharpless & Carpenter's Potato, Corn and Truck Guano.	M. A. Kirby, Falsington, ...	8.28
530		L. F. Mosser, Mosserville, ...	
1155		Smith & McKelvey, Blairsville, ...	
1219	†Susquehanna Crop Grower, ...	S. P. Klingle, Middleburg, ...	9.33
266		Z. J. Peters, Gernsey, ...	
1295	†Susquehauna Potato Phosphate, ...	Percy Harman, Mt. Holly Springs, ..	11.15
241		The J. N. Getz Co., Lock Haven, ..	
135		James Jacobs, York Springs, ...	
439	†Susquehanna Ammoniated Phosphate, ...	Jas. Robinson, Honeybrook, ...	6.73
438		James Robinson, Honeybrook, ...	
95		Amos K. Stoltzfus, Elverson, ...	
691		Henry Sunday, East Berlin, ...	
1	Susquehanna High Grade Truck Mixture, ..	Paxton Flour and Feed Co., Bowmansdale.	6.77
242	†Susquehanna Special Potato and Tobacco Manure.	J. N. Getz & Co., Lock Haven, ...	7.05
94		Amos K. Stoltzfus, Elverson, ...	
440		James Robinson, Honeybrook, ...	
12	Tygert Allen Ten Per Cent. Potato and Vegetable Manure.	J. M. Darrah, Hartsville, ...	9.46
1869	Tygert Allen's Standard Brand Phosphate,	Paxton Flour and Feed Co., Bowmansdale.	8.23
1936	Tygert Allen's Star Brand Phosphate, ...	Harvey Detwiler, Chester Springs, ..	7.33
1937	Tygert Allen's Star Potato Grower, ...	Harvey Detwiler, Chester Springs, ..	8.35
277	†Wheeler's Corn Fertilizer, ...	Daniel Slagen, Logan Mills, ...	9.60
1396	†Wheeler's Special Vegetable Manure, ...	S. A. Norris, Shirleysburg, ...	8.15
88		Wm. J. Johuston, Sinking Spring, ..	
1775		Sam Smith, Nescopeck, ...	
895	Williams' & Clark's Americus Fertilizer, ..	Simon Carl, Numidia, ...	6.80
1486	Williams' & Clark's Chesterfield Manure, ..	J. D. Morris, Covington, ...	8.08
894	†Williams' & Clark's Elk Brand, ...	Simon Carl, Numidia, ...	7.73
1980	†Williams' & Clark's Good Grower, ...	Stewart Weaver, Easton, ...	6.43
996		Jacob Rush, Plumsteadville, ...	
896		Simon Carl, Numidia, ...	
1641		Milton A. Smith, Aquashsashicole,	
997	Williams' & Clark's Matchless Fertilizer, ..	Jacob Rush, Plumsteadville, ...	10.08
483	Williams' & Clark's Panther Phosphate, ..	N. F. Walker, Athens, ...	4.80
1544	Williams' & Clark's Prolific Fertilizer,	C. R. Rosenberger, Colmar, ...	9.35
484		N. F. Walker, Athens, ...	
1640		Milton A. Smith, Aquashsashicole,	
490	†Williams' & Clark's Royal Phosphate, ..	C. E. Drake, Athens, ...	10.40
243		H. L. Lindner, Milton, ...	
1545		C. K. Rosenberger, Colmar, ...	
1487	Williams' & Clark's Springfall Phosphate,	J. D. Morris, Covington, ...	10.70
519	†Zell's Economizer Phosphate, ...	C. H. Kistler, Slatington, ...	11.05
259		O. F. Arnold, Dillsburg, ...	
658		Tressler, Schlegle & Co., Red Cross,	
749	Zell's Hustler Phosphate, ...	Chas. T. Wills & Co., Parnassus, ...	7.08
258	†Zell's Special Compound for Potatoes and Vegetables.	O. F. Arnold, Dillsburg, ...	8.70
520		C. H. Kistler, Slatington, R. D. 2,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
6.51	6.00	1.18	7.69	7.00	10.66	.....	10.66	10.00	2.42	2.47	33.44	30.00	1812
9.23	9.00	.98	10.21	10.00	7.64	.....	7.64	7.00	.82	.82	25.71	24.00	1813
8.26	8.00	1.64	9.90	9.00	4.50	.....	4.50	4.00	1.65	1.65	25.72	22.00	1610
												26.00	667
9.68	9.00	1.47	11.15	10.00	2.56	.....	2.56	2.00	2.52	2.47	29.00	25.00	120
												.....	1776
8.07	8.00	2.14	10.21	9.00	5.73	.62	6.35	6.00	2.27	2.00	30.52	27.00	118
												32.00	1968
												21.00	239
8.42	8.00	1.89	10.31	9.00	4.04	.....	4.04	4.00	.81	.82	21.66	20.00	122
												21.60	666
7.72	7.00	1.45	9.17	8.00	1.18	.....	1.18	1.00	.80	.82	17.83	18.00	551
9.04	7.00	1.41	10.45	8.00	1.32	.....	1.32	1.00	.94	.82	19.96	20.00	1786
8.43	8.00	1.82	10.25	9.00	10.10	.....	10.40	10.00	*1.45	1.65	31.10	27.00	470
9.46	9.00	1.34	10.80	10.00	3.16	.....	3.16	3.00	*.72	.82	21.09	20.00	1856
7.67	7.00	1.02	8.69	8.00	.97	.....	.97	1.00	.90	.82	17.82	18.00	991
8.21	8.00	1.31	9.52	9.00	4.33	.....	4.33	4.00	.82	.82	21.48	21.00	853
												20.10	1328
10.39	9.00	.96	11.35	10.00	7.94	.....	7.94	7.00	1.06	.82	28.36	21.00	840
												.....	801
8.33	8.00	1.12	9.45	9.00	7.33	2.57	9.90	10.00	1.62	1.65	31.46	28.00	529
												32.00	999
7.77	7.00	1.11	8.88	8.00	1.32	.....	1.32	1.00	.91	.82	18.27	17.00	75
												26.00	998
6.80	6.00	1.31	8.11	7.00	5.38	.....	5.38	5.00	1.26	1.23	23.17	22.00	530
												28.00	1155
												.....	1219
7.41	7.00	1.28	8.69	8.00	1.59	.....	1.59	1.00	1.01	.82	18.76	18.00	266
												17.00	1295
												27.00	241
8.35	8.00	1.40	9.75	9.00	5.50	.....	5.50	5.00	1.48	1.65	26.10	25.40	135
												25.00	439
												24.00	438
8.57	8.00	1.36	9.93	9.00	2.76	.....	2.76	2.00	*1.45	1.65	23.24	20.95	95
												21.00	691
7.07	6.00	1.62	8.69	7.00	8.66	1.72	10.38	10.00	*2.53	3.29	35.09	35.00	1
												33.00	242
*7.51	8.00	1.33	8.84	9.00	10.58	.....	10.58	10.00	1.56	1.65	30.58	27.45	94
												30.00	440
8.98	8.00	.99	9.97	9.00	8.84	.....	*8.84	10.00	1.47	1.65	29.67	31.00	52
8.04	8.00	1.50	9.54	9.00	2.23	.....	2.23	2.00	1.46	1.65	22.23	22.00	1869
8.14	8.00	1.67	9.81	9.00	3.77	.....	3.77	3.00	2.04	2.06	26.68	26.00	1936
6.32	6.00	1.76	8.08	7.00	5.47	.....	5.47	5.00	1.17	1.23	23.02	24.00	1937
7.95	8.00	1.44	9.39	9.00	2.43	.....	2.43	2.00	1.54	1.65	22.77	23.00	237
												.....	1396
8.77	8.00	1.11	9.88	9.00	9.50	.....	*9.50	10.00	1.66	1.65	31.12	28.00	88
												.....	1775
*7.59	8.00	1.99	9.58	9.00	10.87	.....	10.87	10.00	1.56	1.65	31.24	26.00	895
6.64	6.00	1.78	8.42	7.00	5.53	.....	5.53	5.00	2.61	2.47	29.52	28.00	1486
8.90	8.00	1.67	10.57	9.00	4.72	.....	4.72	4.00	1.01	.82	23.64	19.00	894
												30.00	1980
												21.60	996
7.30	6.00	1.53	8.83	7.00	4.35	.....	*4.35	5.00	1.28	1.23	22.96	22.00	896
												17.30	1641
9.03	8.00	1.32	10.35	9.00	2.41	.....	2.41	2.00	1 56	1.65	23.77	21.75	997
5.65	5.00	.75	6.40	6.00	11.62	.....	11.62	10.00	1.67	1.65	29.88	28.00	483
												24.00	1544
8.55	7.00	1.21	9.76	8.00	1.56	.....	1.56	1.00	1.06	.82	20.07	20.00	484
												17.00	1640
												21.06	490
8.20	8.00	1.85	10.05	9.00	2.52	.....	2.52	2.00	1.15	1.03	21.45	18.00	243
												28.00	1545
8.17	8.00	2.56	10.73	9.00	3.31	.....	3.31	3.00	2.20	2.06	27.39	25.00	1487
												.....	519
8.64	8.00	1.29	9.93	9.00	2.21	.....	2.21	2.00	.98	.82	20.65	17.75	259
												18.50	658
*8.73	9.00	1.95	10.68	10.00	3.30	.....	3 30	3.00	.94	.82	21.97	26.00	749
8.20	8.00	1.87	10.07	9.00	4.66	.....	4.66	4.00	2.64	2.47	30.48	26.50	258
												.....	520

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	AMERICAN FERTILIZING CO., BALTIMORE, MD.		
1931	American Champion Grain Grower,	Geo. R. Watson, Embreeville,	11.88
752	American Eagle Crop Grower,	Chas. T. Wills & Co., Paruassus,	3.03
751	American Reliable Guano,	Chas. T. Wills & Co., Parnassus,	7.78
1558	†American Special Compound Guano,	Jones Eavenson, Christiana,	10.38
1688		J. D. Coldsmith, Williamson,	
	ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.		
878	Complete Potato,	M. L. Bachman, Lebanon,	9.28
443		Reese H. White, Honeybrook,	
355	†Wheat, Corn and Oat Special,	Confluence Lumber Yard, Confluenee,	5.88
509		Heffner & Luckenbill, Friedensburg,	
611		D. N. Zeller, Meyerstown, R. D. 5,	
562	†Crop Grower,	Seligman & Co., Tamaqua,	7.65
724		C. A. Boyer, Roaring Springs,	
1235	Farmer's Choice,	J. M. Zook, Belleville,	6.50
489	†High Grade Potato,	Winaharn Grange, Nichols, N. Y.,	6.18
864		F. G. Kintzel, Richland,	
442		Reese H. White, Honeybrook,	
357	†Grain Grower,	Confluence Lumber Co., Confluence,	8.98
586		Chas. Yaeckle, Patton,	
1987	Lancaster County Tobacco Special,	Sam. H. Snavely, Manheim,	4.95
1986	Pennsylvania Tobacco Grower,	Sam. H. Snavely, Manheim,	6.53
1988	Pennsylvania Tobacco Special,	Sam. H. Snavely, Manheim,	4.83
444		Reese H. White, Honeybrook,	
398	†Royal Ammoniated,	A. L. Ickes, Osterburg,	7.50
508		Heffner & Luckenbill, Friedensburg,	
947		H. C. Beerits & Sons, Somerset,	
759	†Superior,	Henry S. Brown, Cocolamus,	6.98
1144		A. Skelly, Ebensburg,	
1262		M. L. Bachman, Lebanon,	
746	†Superphosphate, Bone, Blood and Potasb,	Chas. T. Wills & Co., Parnassus,	10.28
1285		Nickles & Stewart, Shippensburg,	
732	†Wheat and Grass Special,	E. H. Buhle, Williamsburg,	5.78
927		S. W. Fritz, Garrett,	
	ATLANTIC FERTILIZER CO., BALTIMORE, MD.		
948	Arrow Brand Special,	Robt. Speicher, Rockwood,	5.53
1678	XX Special Compound for Potatoes,	S. F. Feckman, Williamson,	5.13
1696	Standard Compound,	Lizzeie George, Tioga,	5.10
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.		
228	Honest Potato Grower,	H. E. Van Orner, Thompsontown,	6.95
229	Honest Success,	H. E. Van Orner, Thompsontown,	5.70
625	Honest Tankage, Rock and Potash,	I. M. Leightner, Gettysburg,	6.38
	BAUGH & SONS COMPANY, PHILADELPHIA, PA.		
1888	Baugh's Wheat Fertilizer for Wheat and Grass.	Western Penitentiary, Bellefonte,	7.83
1803	Baugh's High Grade Potato Grower,	C. G. Updegrove, Sacramento,	5.23
1583	The Wrapper Leaf Brand. A Special Manure for Seed Leaf Tobacco.	J. H. Umble & Bro., Bird-in-Hand,	5.10
937	†Baugh,s Balanced Plant Food. A Su-	Wm. P. Hay, Somerset, R. D.,	9.85
1084	perior Fertilizer for General Use.	Jas. G. Kauffman, Dauberville,	
1337	†Baugh's Animal Base and Potash Com-	Brillinger & Swartz, Emigsville,	8.15
1582	pound for All Crops.	J. H. Umble & Bro., Bird-in-Hand,	
216		Wisenhaupt & Frazer, Port Royal,	
146	†Baugh's Excelsior Guano,	Cook & Co., Dillsburg,	7.88
458		John F. Steir, Johnsonville,	
1018		Hobensack Bros., Ivyland,	
449	†Baugh's Potato and Truck Special for all	Jno. F. Steir, Johnsonville,	8.08
1174	Truck Crops.	M. M. Jacklin, Wilawana,	
437		Ed. Brinton & Sons, West Chester,	
264	†Baugh's General Crop Grower for all	Grover C. Myers, Idaville,	7.60
459	Crops.	Jno. F. Steir, Johnsonville,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
9.74	8.00	2.45	12.19	9.00	3.76	.....	*3.76	4.00	.81	.82	23.00	21.00	1931
8.57	8.00	2.26	10.83	9.00	2.26	.15	2.41	2.00	1.61	1.65	24.03	27.00	752
8.93	8.00	1.16	10.09	9.00	1.33	.....	1.33	1.00	.96	.82	19.80	25.00	751
7.64	7.00	2.21	9.85	8.00	3.36	.....	3.36	3.00	.64	.41	19.64	17.00	1558
												16.00	1688
6.23	6.00	.88	7.11	6.50	11.29	.....	11.29	10.00	*3.03	3.29	36.60	33.00	878
												17.00	443
*6.57	7.00	1.41	7.98	7.50	1.41	.....	1.41	1.00	.86	.82	17.06	19.00	355
												18.00	509
												19.00	611
8.07	8.00	.73	8.80	8.50	2.46	.....	2.46	2.00	.86	.82	19.34	22.00	563
												18.00	724
9.19	9.00	1.52	10.71	9.50	3.59	.....	3.59	3.00	.81	.82	21.82	19.50	1235
*7.71	8.00	1.33	9.04	8.50	10.21	.....	10.21	10.00	1.76	1.65	31.29	23.85	480
												27.50	864
												20.00	442
7.89	8.00	1.40	9.29	8.50	2.35	.....	2.35	2.00	1.61	1.65	22.83	24.00	357
												22.00	586
4.46	4.50	2.43	6.89	5.00	1.60	9.71	11.31	10.50	*5.58	6.17	49.57	45.50	1987
7.82	8.00	1.24	9.06	8.50	5.33	.36	*5.69	6.00	*1.80	2.47	27.07	28.50	1986
8.62	8.00	1.81	10.43	8.50	1.20	5.05	*6.25	7.00	*3.70	4.11	38.54	37.00	1988
												19.00	444
7.82	8.00	1.52	9.34	8.50	4.11	.....	4.11	4.00	.84	.82	21.19	.....	398
												21.00	508
												25.00	947
3.04	8.00	.64	8.68	8.50	7.09	.....	7.09	7.00	.84	.82	24.04	22.00	759
												22.00	1144
												35.00	1262
8.47	8.00	1.77	10.24	8.50	7.01	.....	7.01	7.00	*3.86	4.11	38.61	42.00	746
												37.00	1285
6.98	7.00	.83	7.81	7.50	5.63	.....	5.63	5.00	1.01	.82	22.25	19.00	732
												22.00	927
7.86	8.00	1.06	8.92	9.00	4.39	.....	4.39	4.00	.99	.82	21.96	18.50	948
7.87	8.00	1.25	9.12	9.00	11.01	.....	11.01	10.00	1.58	1.65	31.52	27.00	678
*7.51	8.00	.92	*8.43	9.00	2.41	.....	2.41	2.00	1.70	1.65	22.74	27.00	1696
7.11	6.00	2.55	9.66	7.00	9.54	.....	9.54	8.00	1.55	1.60	29.68	26.00	228
7.16	7.00	1.93	9.09	8.00	4.68	.....	4.68	4.00	.90	.80	21.54	19.00	229
7.89	7.00	.51	8.40	8.00	1.92	.....	1.92	1.00	.78	.20	18.30	16.00	625
7.98	8.00	1.38	9.36	.....	2.97	.....	2.97	2.00	1.61	1.65	23.49	.....	1888
9.10	8.00	1.95	11.05	.....	9.60	.73	10.33	10.00	3.63	3.30	42.01	32.50	1803
4.65	3.50	1.85	6.50	.....	6.37	.....	6.37	5.00	3.35	3.30	31.78	28.00	1583
11.67	10.50	1.34	13.01	.....	5.64	.....	*5.64	7.00	1.70	1.65	30.44	28.00	937
												26.00	1084
8.70	8.00	2.07	10.77	.....	2.95	.....	2.95	2.00	1.58	1.65	24.57	21.00	1337
												22.00	1582
												19.65	216
8.69	8.00	1.19	9.88	.....	4.39	.....	4.39	4.00	1.01	.82	22.90	18.25	146
												25.00	458
												34.10	1018
8.28	7.00	1.28	9.56	.....	7.08	.....	7.08	7.00	2.89	2.88	33.94	35.00	449
												32.10	1174
												21.00	437
8.94	8.00	2.42	11.36	.....	1.86	.....	1.86	1.00	1.08	.82	21.58	16.50	264
												.....	459

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
1016	†Baugh's Peruvian Guano Substitute for Potatoes and all Vegetables.	Hobensack Bros., Ivyland,	6.25
550		S. K. Moore, Coopersburg,	
1175		M. M. Jacklin, Wilawana,	
1898	†Baugh's Peninsula Grain Producer,	A. M. Rishel, Bellefonte,	8.80
148		Cook & Co., Dillsburg,	
1958	†Baugh's Grand Rapids High Grade Guano.	Olive Miheil, Bushkill,	5.88
224		John D. Miller, Richfield,	
1358	†Baugh's Ammoniated Soluble Alkaline,	C. I. Saylor, Felton,	7.53
262		Grover C. Meyers, Idaville,	
79		L. A. Geiger, Joanna,	
1279	†Baugh's Complete Animal Base Fertilizer.	S. E. Shank, Newville,	7.83
147		Cook & Co., Dillsburg,	
76		L. A. Geiger, Joanna,	
198	†Baugh's Special Potato Manure,	Frank Sieber, Mifflintown,	6.25
263		Grover C. Meyers, Idaville,	
77		L. A. Geiger, Joanna,	
435		Ed. Brinton & Sons, W. Chester,	
	W. C. BECKERT, NORTH SIDE, PITTSBURGH, PA.		
324	Beckert's Odorless Lawn and Garden Fertilizer.	W. C. Beckert, Pittsburgh,	6.00
	THE BERG COMPANY, PHILADELPHIA, PA.		
1997	D. K. Dee Kay Guano,	W. C. Herr, Strasburg,	4.73
407	†Berg's High Grade Potato Manure,	B. R. Watson, Oxford,	7.65
1247		Wm. T. Zeigler, Cressona,	
984	†Berg's Ya Goot Brand,	Jas. Brady, Lansdale,	8.73
1117		A. B. Graff, New Holland,	
1933	Berg's Pure Dissolved Bone and Potash for Wheat and Grass.	Geo. R. Watson, Embreeville,	4.38
406	†Berg's S. B. M. Standard Bone Manure,	B. R. Watson, Oxford,	8.73
1248		Wm. T. Zeigler, Cressona,	
409	†Berg's Special Bone Manure,	B. R. Watson, Oxford,	7.58
1550		A. B. Graff, New Holland,	
1984	Berg's Tobacco Manure,	A. B. Graff, New Holland,	9.93
	BERGER BROS., EASTON, PA.		
1626	Farmers' Favorite Superphosphate,	John Osterstock, Easton,	16.13
	D. BLOCKER & CO., BALTIMORE, MD.		
628	Ammoniated Soluble Phosphate,	J. H. Stevens' Barn, Gettysburg,	8.00
	J. W. BARWELL, WAUKEGAN, ILL.		
739	Barwell's Plant Grower and Land Renovater.	H. J. Klinger & Co., Butler,	7.50
	BOWKER FERTILIZER CO., NEW YORK CITY.		
318	†Bowker's Corn and Grain Grower,	C. S. Hunter & Co., Washington,	10.30
205		Jno. Sieber, Mifflintown,	
344		L. S. Harris, Harrisburg,	
748	Bowker's Farm and Garden Phosphate,	Chas. T. Willis & Co., Parnassus,	8.68
1376	Bowker's Ideal Potash Compound,	H. W. Rehmeyer, Turnpike,	10.45
345	†Bowker's Market Garden Fertilizer,	L. S. Harris, Harrisburg,	13.13
316		C. S. Hunter Co., Washington,	
1104		Wm. Gerhart, Reinholds,	
348	†Bowker's Potash Fertilizer,	S. A. Fishburn, Penbrook,	8.38
1402		B. F. Fink, Huntingdon,	
452	†Bowker's Potash or Staple Phosphate,	Isaac Snyder, Bangor,	9.85
670		Walter Pierce, E. Smithfield,	
750	†Bowker's Potato and Vegetable Fertilizer.	Chas. T. Wills & Co., Parnassus,	10.05
727		H. L. Stultz, Hollidaysburg,	
1403		B. F. Fink, Huntingdon,	
1740	†Stockbridge's Special Complete Manure for Potatoes and Vegetables.	Alex Strittmatter, Bradley's Junc.,	7.38
1261		H. B. Harned, Wyoming,	
1911		J. C. Mattern, Port Matilda,	
1912	Stockbridge's Special Complete Manure for Corn and All Grain Crops.	J. C. Mattern, Port Matilda,	1.23
451	†Bowker's Special Crop Grower,	Isaac Snyder, Bangor,	7.45
1378		H. W. Rehmeyer, Turnpike,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
6.94	6.00	1.45	8.39	.....	5.86	1.81	7.67	7.00	4.10	4.12	39.12	38.00	1016
												35.00	550
												35.60	1175
												.....	1898
8.95	8.00	1.66	10.61	.....	3.32	.....	3.32	2.00	.98	1.00	22.26	18.25	148
												22.00	1950
8.35	8.00	1.00	9.35	.....	3.51	.....	3.51	3.00	2.43	2.47	28.15	25.50	224
												24.00	1358
8.33	8.00	1.19	9.52	.....	2.48	.....	2.48	2.00	.41	.41	15.22	15.00	262
												17.00	79
												15.00	1279
8.76	8.00	2.05	10.81	.....	4.81	.....	4.81	5.00	1.50	1.65	26.05	22.75	147
												23.00	76
												.....	198
												24.00	263
5.54	5.00	2.51	7.75	.....	8.66	1.72	10.38	10.00	1.46	1.65	28.59	25.00	77
												32.00	435
6.26	.....	15.25	*21.51	22.00	2.16	.....	2.16	2.00	1.73	1.65	28.27	43.00	324
*7.08	7.50	2.81	9.89	10.00	.66	.38	1.04	.50	2.35	2.47	24.87	25.00	1997
8.62	8.00	1.54	*10.16	11.00	9.78	.....	*9.78	10.00	*2.50	3.00	35.31	35.60	407
												.....	1247
7.96	8.00	1.43	*9.39	11.00	3.87	.....	3.87	4.00	1.01	.82	21.69	22.00	984
												19.00	1117
*6.51	9.00	4.80	*11.31	12.00	5.38	.....	5.38	5.00	*1.69	2.00	26.60	28.00	1933
10.29	8.00	2.73	13.02	11.00	5.06	.....	*5.06	6.00	*1.58	3.00	28.68	30.00	406
												.....	1248
8.57	7.00	2.84	11.41	11.00	3.31	.....	3.31	3.00	*1.10	2.00	22.88	25.00	409
												24.00	1550
8.78	8.00	1.91	*10.79	11.00	4.14	.....	*4.14	6.00	*1.77	3.00	26.61	29.00	1984
7.10	7.00	1.02	8.12	.....	3.18	.....	3.18	2.50	1.02	.82	19.95	18.00	1626
11.48	9.00	.36	11.84	10.00	2.63	.....	2.63	1.50	.41	.41	17.34	17.00	628
*4.66	5.25	4.43	*9.09	10.50	1.46	4.24	*5.70	6.00	4.94	5.00	40.68	60.00	739
8.57	8.00	1.53	10.10	9.00	3.74	.....	*3.74	4.00	.77	.82	21.12	25.00	318
												19.00	265
												.....	344
*7.46	8.00	2.65	10.11	9.00	2.91	.....	2.91	2.00	1.65	1.65	23.76	26.00	748
10.09	10.00	.96	11.05	11.00	5.44	.....	*5.44	6.00	1.11	1.23	25.74	23.00	1376
												.....	345
6.54	6.00	1.06	7.60	7.00	9.59	.....	*9.59	10.00	2.33	2.47	32.10	36.00	316
												.....	1104
6.38	6.00	1.33	7.71	7.00	2.46	.....	2.46	2.00	*.72	.82	17.76	17.50	348
												23.00	1402
8.68	8.00	1.72	10.40	9.00	2.77	.....	*2.77	3.00	.91	.8-	21.01	.....	452
												25.00	670
												32.00	750
8.81	8.00	1.50	10.31	9.00	4.35	.....	4.35	4.00	*2.21	2.47	28.57	30.00	727
												36.00	1403
												33.00	1740
6.74	6.00	1.19	7.93	7.00	10.50	.....	10.50	10.00	3.60	3.29	39.00	.....	1261
												.....	1911
10.93	10.00	1.08	12.01	11.00	7.53	.....	7.53	7.00	3.14	3.2[illegible]	38.14	.....	1912
8.71	8.00	1.50	10.21	9.00	9.76	.....	*9.76	10.00	1.62	1.65	31.24	.....	451
												26.00	1378

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
592	†Bowker's Sure Crop Phosphate,	Hamburg Supply House, Hamburg,	11.18
349		S. A. Fishburn, Penbrook,	
730		H. L. Stultz, Hollidaysburg,	
25	Bowker's Ammoniated Food for Flowers,	W. C. Beckert, Pittsburgh, North Side.	4.75
	BRADLEY & GREEN FERTILIZER CO., PHILADELPHIA, PA.		
1022	Extra High Grade Potato Guano,	Bradley & Green Ftz. Co., Phila.,	7.60
1021	High Grade Potato Guana,	Bradley & Green Ftz. Co., Phila.,	6.53
	CAMBRIA FERTILIZER CO., JOHNSTOWN, PA.		
931	B. and B. Phosphate,	Claude Davis, Windber,	10.13
930	Corn and Potato Manure,	Claude Davis, Windher,	5.89
929	Standard Phosphate,	Claude Davis, Windber,	4.70
	CENTRAL CHEMICAL CO., HAGERSTOWN, MD. THOMAS FERTZ. WORKS.		
1307	C. C. C. Farmer's Century Brand,	E. W. Rupp, Shiremanstown,	7.88
1822	C. C. C. Atlas Keystone,	H. R. Miller, Huntsdale,	6.88
1684	C. C. C. Golden Sheaf,	J. A. Witherspoon, Mercersburg,	8.85
1137	C. C. C. Crescent Jewel,	W. F. Slagle, Bloomsburg,	7.63
1141	C. C. C. Fish Guano,	W. F. Slagle, Bloomshurg,	6.25
883	C. C. C. Fish, Bone and Potash,	M. G. Adams, Paxinos,	8.40
1306	†C. C. C. Superior Planter's Mixture,	E. W. Rupp, Shiremanstown,	6.68
1821		H. R. Miller, Huntsdale,	
1140		W. F. Slagle, Bloomsburg,	
532	†C. C. C. Empire,	Oliver De Long, Sayersville,	7.60
1685		J. A. Witherspoon, Mercersburg,	
523	Excelsior Pheonix,	Oliver De Long, Sayersville,	6.38
6	C. C. C. Farm Favorite,	H. A. Snyder, Fishers Ferry,	6.01
41	C. C. C. Special,	Morris T. Wood, Downingtown,	8.80
8	C. C. C. Valley Mixture,	E. J. Otto, Herndon,	8.38
	CHESAPEAKE CHEMICAL CO., THE, BALTIMORE, MD.		
589	C. C. Co's English Mixture,	Wm. Biller, Patton,	6.95
713	C. C. Co's Farmer's Favorite,	Wm. Biller, Patton,	5.90
711	C. C. Co's Triumph Guano,	Wm. Biller, Patton,	7.30
	COE MORTIMER CO., THE, NEW YORK.		
1982	E. Frank Coe's Reliable Crop Grower,	J. W. Shoewalter, New Holland,	8.80
2007	E. Frank Coe's Penna. Tobacco Special,	Newton S. Sprecher, Ephrata,	4.80
1611	E. Frank Coe's Gold Brand Excelsior Guano.	Adolph Boettinger, Danville,	8.68
475	E. Frank Coe's Extra Special Potato Fertilizer and Fruit Grower.	C. J. Easterbrook & Son, Rummerfield.	7.58
494	†E. Frank Coe's Penna. No. 1 Grain Special for Wheat, Rye and Oats.	Floyd Campbell, Athens,	8.98
65		W. W. Frick & Co., Kutztown,	
1638		Miltou A. Buck, Kunkletown,	
308	†E. Frank Coe's Columbia Corn and Potato Fertilizer.	I. W. Scott Co., Pittsburgh,	10.25
66		W. W. Frick & Co., Kutztown,	
495		Floyd Camphell, Athens,	
	COLUMBIA GUANO CO., BALTIMORE, MD.		
1699	Columbia Fish, Phosphate and Potash,	E. D. Davis, Middlehurg Center,	3.58
1712	Bully Good Guano,	Owlett & Twilliger, Galeton,	1.73
488	Columhia Special Potato Guano,	Henry & Bressler, Athens,	4.03
1656	†Columbia Special Potato Formula,	Wm. H. Brinton, Fallscreek,	7.23
1590		Jno. Kelsa, Mansfield,	
1960		John Cook, Bushkill,	
1711	†Columbia General Crop Manure,	Owlet & Twilliger, Galeton,	12.20
1961		John Cook, Bushkill,	
50	Columhia Grain Special Fertilizer,	Thomas Prosinger, Reeders,	7.54
	HENRY COPE & CO., LINCOLN UNIVERSITY, PA.		
1946	Henry Cope & Co's Ammoniated Phosphate,	Lyburn Whitaker, Oxford,	13.18
1542	Potato and Corn Phosphate,	Thos. Haines & Co., Malvern,	11.63

†Composite sample.

LIZERS—Continued

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
9.25	9.00	1.40	10.65	10.00	2.27	.....	2.27	2.00	.86	.82	20.67	20.00 19.50 20.00	592 349 720
6.94	.....	1.49	8.43	.....	.80	3.14	3.94	2.00	3.11	2.47	31.14	.....	25
7.00	6.00	1.20	8.20	7.00	8.93	.14	*9.08	10.00	*2.89	3.29	34.66	33.00	1022
8.51	8.00	1.52	10.03	9.00	10.81	.....	10.81	10.00	1.71	1.65	32.61	28.00	1021
6.49	6.50	2.04	8.53	8.00	2.79	.....	2.79	2.00	*.86	1.00	18.75	22.00	931
7.47	6.00	1.86	9.33	7.00	9.03	.....	9.03	8.00	1.52	1.50	29.01	32.00	930
6.41	6.00	2.27	8.68	7.00	5.40	.....	5.40	3.00	1.76	1.50	25.54	25.00	929
8.04	8.00	8.28	8.32	.....	2.64	.....	2.64	2.00	.81	.82	19.08	18.00	1307
8.34	8.00	.28	8.62	.....	4.96	.....	4.96	4.00	*.57	.82	20.60	20.00	1822
*7.26	8.00	.50	7.76	.....	1.38	.....	1.38	1.00	1.15	.82	18.70	16.00	1684
9.22	9.00	.37	9.59	.....	3.89	.....	3.89	3.00	.81	.82	21.63	21.00	1137
*7.75	8.00	.45	8.20	.....	4.62	.....	4.62	4.00	.86	.82	21.09	22.00	1141
7.19	7.00	.35	7.54	.....	3.43	.....	3.43	3.00	*.84	1.04	19.21	21.00	883
8.08	8.00	.31	8.39	.....	6.23	.....	6.23	6.00	.84	.82	23.06	21.00 21.00 22.00	1306 1821 1140
8.39	8.00	.38	8.77	...	8.00	2.29	10.29	10.00	1.68	1.65	31.95	..... 30.00	532 1685
8.16	8.00	.28	8.44	.....	4.59	.....	4.59	4.00	1.50	1.65	24.39	.....	533
9.56	8.00	.51	10.07	9.00	3.16	.....	3.16	3.00	.59	.41	20.34	.....	6
8.51	8.00	.58	9.09	.....	3.60	4.31	7.91	8.00	1.60	1.65	29.78	22.50	41
8.51	8.00	.61	9.12	.....	2.19	.....	2.19	2.00	*1.27	1.65	21.31	21.50	8
7.81	8.00	1.09	8.90	9.00	6.21	.....	6.21	5.00	.95	1.00	23.54	20.00	589
7.04	7.00	1.12	8.16	8.00	4.76	.....	4.76	4.00	.82	.82	20.88	18.00	713
*7.03	8.00	2.67	9.70	9.09	9.90	.....	9.90	10.00	1.60	1.64	30.26	27.00	711
9.45	9.00	1.85	11.30	10.00	4.42	.....	*4.42	5.00	1.76	1.65	27.39	23.00	1982
6.28	6.00	.98	7.26	7.00	1.33	8.98	10.31	10.00	*1.75	2.47	31.89	37.00	2007
8.97	8.00	1.34	10.31	9.00	6.62	.....	6.62	6.00	*2.20	2.47	30.94	30.00	1611
7.97	8.00	2.33	10.30	9.00	10.44	.....	10.44	10.00	1.56	1.65	31.96	25.30	475
8.43	8.00	1.40	9.83	9.00	3.86	.....	3.86	3.00	1.01	.82	22.17	21.00 21.00 22.00	494 65 1638
8.58	8.50	1.75	10.33	9.50	3.77	.....	3.77	2.50	*.86	1.23	21.72	27.00 24.00 22.50	308 66 493
8.34	8.00	1.22	9.56	8.50	3.13	.....	3.13	3.00	1.63	1.65	24.24	27.00	1699
7.95	6.00	1.93	9.88	6.50	4.88	.....	4.88	5.00	1.48	1.23	25.29	27.00	1712
*4.65	5.00	1.00	5.65	5.50	9.30	.95	10.25	10.00	1.46	1.65	26.92	28.00	488
*7.49	8.00	2.32	9.81	8.50	10.07	.....	10.07	10.00	1.70	1.65	31.16	28.50 30.00 31.00	1656 1500 1960
7.99	8.00	1.30	9.29	8.50	4.76	.....	4.76	4.00	98	.82	22.59	24.00 24.00	1711 1961
*7.59	8.00	1.77	9.36	8.50	2.71	.....	2.71	2.00	1.02	.82	20.31	21.00	50
9.84	7.00	1.43	11.27	9.00	3.76	.....	3.76	2.00	.94	1.00	23.28	21.00	1946
8.08	7.00	.64	*8.72	9.00	5.81	.....	5.81	4.00	1.22	1.25	24.31	23.00	1542

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	JOSIAH COPE & CO., BALTIMORE, MD.		
1541	Josiah Cope & Co. Ammoniated Phosphate,	Henry Wilson, Frazer,	7.65
1553	Josiah Cope & Co. Potato and Tobacco Phosphate.	Jas. Eavenson, Christiana,	7.68
1552	Josiah Cope & Co. Pure Bono Phosphate,	Jas. Eavenson, Christiana,	7.20
1929	Josiah Cope & Co. Try Me Fertilizer,	F. E. Bailey, Northbrook,	8.30
	JAMES G. DOWNWARD CO., COATESVILLE, PA.		
415	†All Crop Fertilizer,	Ed. Miller, New London,	7.48
1267		H. E. Lehman, Palmyra,	
413	†Ammoniated Phosphate,	Ed. Miller, New London,	6.78
2025		Abram Reese, New Providence,	
1527	Corn, Wheat and Grass Special,	S. Harry Hibbs, Hulmerville,	4.80
1519	High Grade Pioneer for Tobacco,	Jas. G. Downward, Coatesville,	6.20
414	Special Potato Fertilizer,	Ed. Miller, New London,	5.58
	WALLACE DUNGAN, DOYLESTOWN, PA.		
1548	Pebble Hill Home Made Animal Mixture,	Wallace Dungan, Doylestown,	7.95
1549	Potato Manure,	Wallace Dungan, Doylestown,	6.53
	AMOS EBY & CO., LEAMAN PLACE, PA.		
2010	Pequia Ammoniated,	Ira B. Grabill, Refton,	9.20
2011	Pequia Valley Fertilizer,	Ira B. Grabill, Refton,	7.13
	ERIE REDUCTION CO., ERIE, PA.		
817	Erie Corn and Oat Special,	Chas. Hartly, North East,	5.45
818	Erie Favorite,	Jas. Dobson, North East,	7.00
815	Erie Grain Special,	Gust Schultz, North East,	7.48
809	Erie Potato and Truck Special,	Theilman Seed Co., Erie,	7.08
	EUREKA CHEMICAL CO., BALTIMORE, MD.		
1302		J. D. Beitzel, Mechanicsburg,	
790	†Eureka Complete Compound,	Geo. Zimmerman, Cowan,	6.20
1357		C. I. Saylor, Felton,	
1318		N. E. Galbrecht & Bro., Hanover,	
1301	†Eureka Fish and Potash,	D. J. Beitzel, Mechanicsburg,	5.83
2015		New Prov. Coal Co., New Providence.	
343	†Eureka High Grade Trucker,	Daniel Mader, Linglestown,	7.65
1105		Henry Oberlin, Reinholds,	
506	†Eureka Grain and Grass,	Wm. Schwartz, Cressona,	6.45
2014		New Prov. Coal Co., New Providence.	
1303		O. J. Beitzel, Mechanicsburg,	
781	†Eureka Potato and Vegetable,	M. C. Catherman, Millmont,	7.25
2013		New Prov. Coal Co., New Providence.	
	FARMERS' FERTILIZER WORKS, THE, ELIZABETHTOWN, PA.		
1862	Best Yet,	Duncannon Flouring Mill Co., Duncannon.	3.38
329	Grain and Grass Special,	John Sheetz, Elizabethville,	8.35
328	Pride of Donegal,	John Sheetz, Elizabethville,	6.13
341	†Special Potato and Tobacco Manure,	M. G. Stricker, Dauphin,	5.55
1833		B. F. Horting, Newport,	
	W. S. FARMER & CO., BALTIMORE, MD.		
1360	W. S. Farmer & Co's Climate Phosphate,	D. J. Trout, Stewartstown,	7.05
1361	W. S. Farmer & Co's Diamond Back Brand.	D. J. Trout, Stewartstown,	8.95
1359	W. S. Farmer & Co's Pelican Guano,	D. J. Trout, Stewartstown,	6.25
43	W. S. Farmer & Co's Clyde Brand,	J. W. Shoemaker, Littlestown,	11.23
44	W. S. Farmer & Co's Harvest Queen,	J. W. Shoemaker, Littlestown,	12.72
	JOS. R. GAWTHROP, KENNETT SQUARE, PA.		
399	Special Potato Phosphate,	Jos. R. Gawthrop, Kennett Square,	4.38

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
9.62	8.00	.66	10.28	9.00	2.26	.....	*2.26	3.00	*.42	.82	15.70	23.00	1541
10.59	10.00	1.87	12.46	11.00	6.74	.....	*6.74	7.00	.87	.8.	26.86	25.00	1553
10.10	9.00	5.84	15.94	13.50	3.88	.....	3.88	4.00	1.85	1.85	29.94	26.00	1552
7.86	8.00	1.78	9.64	9.00	5.49	.....	5.49	4.00	*1.31	1.65	24.85	24.00	1929
7.83	7.00	.91	8.74	8.00	3.86	.....	3.86	3.00	.42	.41	16.12	19.00	415
												19.00	1267
8.11	7.00	.80	8.91	8.00	3.69	.....	3.69	3.50	.83	.82	20.71	24.00	413
												.....	2025
9.53	7.00	.80	10.33	.....	4.06	.....	4.06	3.50	1.61	1.65	25.95	.....	1527
8.27	6.00	1.19	9.46	7.00	4.26	.....	*4.26	5.00	*2.84	3.28	30.72	.....	1519
7.26	7.00	1.20	8.46	8.00	6.48	.....	6.48	5.00	1.21	1.24	24.48	27.00	414
*6.95	9.00	6.02	12.97	12.00	6.53	.....	6.53	5.00	*2.58	3.2.	32.91	30.00	1548
*5.12	7.00	3.92	9.04	9.00	10.80	.74	11.54	10.00	3.03	3.07	37.38	32.00	1549
11.25	10.00	1.40	12.65	12.00	2.68	.....	2.68	2.00	.93	.82	23.64	20.00	2010
9.49	8.00	1.53	11.02	9.00	9.06	1.60	10.66	10.00	1.60	1.65	33.32	28.00	2011
8.78	‡8.00	1.81	10.59	.....	4.72	.....	4.72	4.00	.83	.82	22.92	21.50	817
9.20	‡8.00	3.04	12.24	.....	2.28	.....	2.28	2.00	*1.39	1.64	23.98	22.50	818
9.25	‡8.00	2.11	11.36	.....	2.85	.....	2.85	2.00	2.33	2.46	28.46	25.00	815
8.46	‡7.00	1.98	10.44	.....	10.10	.....	10.10	10.00	*1.82	2.4.	32.49	33.00	809
7.68	7.00	.73	8.41	7.50	5.24	.....	5.24	5.00	.85	.82	21.79	20.00	1302
												19.25	790
												19.00	1357
8.34	8.00	.99	9.33	8.50	1.90	.....	1.90	1.00	.71	.41	18.54	15.00	1318
												15.00	1301
												15.00	2015
9.64	8.00	.93	9.57	8.50	9.84	.....	9.84	10.00	1.63	1.65	31.20	30.00	343
												30.00	1105
8.92	8.00	.54	9.46	8.50	3.01	.....	3.01	2.00	.85	.82	20.68	16.20	506
												18.00	2014
												24.00	1303
8.77	8.00	.89	9.66	8.50	4.52	.....	4.52	4.00	1.76	1.65	26.34	22.00	781
												24.00	2013
9.26	8.00	1.26	10.52	.....	2.00	8.52	10.52	10.09	1.63	1.6	34.71	26.00	1862
8.77	8.00	1.02	9.79	.....	4.83	.....	4.83	4.00	.96	.82	23.13	19.00	329
7.79	7.00	2.05	9.84	.....	3.60	5.05	8.65	5.00	1.66	1.65	30.90	23.00	328
7.12	6.00	1.54	8.66	.....	1.33	10.35	11.68	10.00	2.38	2.47	37.76	32.00	341
												29.00	1833
7.73	7.00	1.09	8.82	8.00	4.44	.....	4.44	4.00	.90	.82	21.43	18.00	1360
9.15	8.00	.95	10.10	9.00	4.61	.....	*4.61	5.00	1.28	1.03	24.81	22.00	1361
6.24	6.00	.81	7.05	7.00	2.53	.....	*2.53	3.00	.51	.41	16.04	16.00	1359
8.48	8.00	1.11	9.59	9.00	2.21	.....	2.21	2.00	.87	.82	19.72	17.50	43
8.81	9.00	1.81	10.62	10.00	3.32	.....	3.32	3.00	1.14	1.03	22.85	19.50	44
6.57	5.00	.90	7.47	6.00	.66	2.53	3.19	3.00	1.11	.82	20.41	27.00	399

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	GRIFFITH & BOYD CO., BALTIMORE, MD.		
1190	†Griffith & Boyd's Cereal Plant Food, ...	Adam Krug, Allenwood, ...	7.83
613		H. J. Van Dyke, Gettysburg, ...	
1596		Bear & Long, Lititz, ...	
1093	†Griffith & Boyd's Double Strength Tobacco Grower.	Elias Wolf, Akron, ...	7.35
1332		Geo. W. Wolf's Sons, York, ...	
403	†Griffith & Boyd's Farmer's Potato Manure.	Passmore Co., Nottingham, ...	8.28
201		John Hostetler, Walnut, ...	
521		Jas. Lochnor, New Tripoli, ...	
528	†Griffith & Boyd's Gilt Edge Crop Guano,	J. F. Kuntz, New Tripoli, ...	5.60
180		A. K Kulp, Pottstown, ...	
223	†Griffith & Boyd's Farmer's Improved Phosphate.	John Hostetler, Walnut, ...	7.73
1334		Geo. Wolf's Sons, Mt. Wolf, ...	
1939	Griffith & Boyd's Vegetable Bone, ...	E. B. Ruhl & Son, Manheim, ...	8.95
	FRANK HARTRANFT, COATESVILLE, PA.		
1002	Potato Phosphate, ...	Preston Powell, West Grove, ...	8.88
1001	Cook's Phosphate, ...	Preston Powell, West Grove, ...	9.85
1000	Special Phosphate, ...	Preston Powell, West Grove, ...	12.50
1014	Spring Crop Grower Phosphate, ...	Preston Powell, West Grove, ...	9.68
	W. S. HASTINGS & SON, ATGLEN, PA.		
1511	Atglen Brand, ...	W. S. Hastings & Son, Atglen, ...	7.35
	S. M. HESS & BRO., INC., PHILADELPHIA, PA.		
1074	S. M. Hess & Bro. Jumbo Complete Formula.	H. D. Weist, Tulpehoeken, ...	8.55
546	†S. M. Hess & Bro. Potato and Truck Manure.	J. F. Mary, Allentown, R. D. 2, ...	9.58
213		C. W. Book, Port Royal, ...	
1693		J. W. Hartman, Kauffmans, ...	
197	†S. M. Hess & Bro. Speeial Corn Manure,	Irvin Basor, Mifflintown, ...	10.58
98		Stephen H. Mast, Elverson, ...	
376		A. F. Hengst, Osterburg, ...	
214		C. W. Book, Port Royal, ...	
108	†S. M. Hess & Bro. Superior Potash Mixture.	Jas. Westley, Mohnton, ...	8.78
353		Geo. F. Wass, Addison, ...	
1858	S. M. Hess & Bro., The Scientifie Manure,	J. E. Cooper, Landisburg, ...	6.08
215	†S. M. Hess & Bro. Keystone Phosphate,	C. W. Book, Port Royal, ...	8.15
97		Stephen H. Mast, Elverson, R. D. No. 3.	
352		J. B. Davis & Sons, Ursina, ...	
557	†S. M. Hess & Bro. Special Compound, ..	Harvey T. Troxell, Allentown, Pa.,	9.10
96		Stephen H. Mast, Elverson, ...	
1209		C. A. Shatzberger, Freeburg, ...	
38	S. M. Hess & Bro. Tobaeco Manure, ...	Benj. J. Weiduer, Lititz, ...	8.48
	HUBBARD FERTILIZER CO., THE, BALTIMORE, MD.		
277	†Hubbard's Climax Phospbate, ...	Bigleryille Warehouse Co., Bigleryille.	10.63
192		H. M. Ower, Lewistown, ...	
296		J. H. Romberger, Elizabethville, ..	
190	†Hubbard's Columbia Gem Pbosphate, ...	H. M. Ower, Lewistown, ...	6.10
151		J. B. Spera, Dillsburg, ...	
1605		D. C. Shuman, Bloomsburg, ...	
1319	†Hubbard's Farmer's I. X. L., ...	J. Emory Maul, Iron Ore, ...	5.80
576		F. P. Waite, Tyrone, ...	
1589		J. H. Umbel & Bro., Bird-in-Hand,	
191	†Hubbard's Jersey Trueker, ...	H. M. Ower, Lewistown, ...	12.05
141		J. B. Spera, Dillsburg, ...	
575		F. P. Waite, Tyrone, ...	
911	†Huhbard's Jewel Phosphate, ...	Howard Bucket, Cessna, ...	6.00
142		J. B. Spera, Dillsburg, ...	
1202		L. L. Spangler, Mifflinburg, ...	
1915	Hubbard's Money Maker, ...	James Thompson, Lemont, ...	7.78
899	Hubbard's Royal Ensign, ...	Sam'l Rarig, Catawissa, ...	5.85
	INTERNATIONAL AGRICULTURAL CORPORATION, PA. BRANCH, BUFFALO, N. Y.		
2107	Economy, ...	J. M. Raab & Bro., Midway, ...	9.03

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.						
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.	Found.	Guaranteed.			
8.36	8.00	2.68	11.04	9.00	2.48	.....	2.48	2.00	.84	.85	20.65	18.00 20.00 21.00	1190 616 1596
8.31	8.00	1.76	10.07	9.00	2.82	.....	2.82	3.00	*1.80	2.50	24.78	28.00 17.00 25.00	1093 1332 403
8.81	8.00	1.11	9.92	9.00	9.14	.....	9.14	9.00	.80	.85	26.89	24.00 24.00	201 521
7.85	8.00	1.72	9.57	9.00	10.50	.....	10.50	10.00	1.67	1.65	31.46	26.50 30.00	528 980
8.81	7.00	3.63	12.44	8.00	2.64	.....	2.64	2.00	.81	.85	21.48	..... 18.00	223 1334
8.50	8.00	.40	8.90	9.00	5.72	.....	*5.72	7.00	2.34	2.50	29.80	.....	1989
9.24	8.00	1.34	10.58	9.00	6.5	.....	*6.52	8.00	.89	.82	24.70	28.00	1002
10.33	7.00	1.52	11.85	12.00	4.91	.....	4.91	3.00	*1.12	1.65	25.70	30.00	1001
11.98	10.00	1.66	13.64	11.00	2.78	.....	2.78	2.00	.90	.82	24.44	22.00	1000
11.82	10.00	1.24	12.06	11.00	3.50	.....	3.50	2.00	.61	.41	20.38	18.00	1014
8.63	8.00	.60	9.23	.....	5.80	.....	5.80	5.00	1.63	1.65	27.06	23.00	1511
7.86	7.00	1.16	8.96	8.00	1.65	.....	1.65	1.00	1.14	.82	19.83	20.00	1074
9.17	8.00	1.28	10.45	9.00	6.33	.....	6.33	6.00	2.45	2.47	32.01	32.50 30.00 28.50	546 213 1693
8.69	8.00	1.28	9.97	9.00	2.10	.....	2.10	2.00	82	.82	19.90	..... 24.00 19.00	197 98 376
8.16	8.00	1.31	9.47	9.00	10.16	.....	10.16	10.00	*1.43	1.65	30.31	29.50 30.00 32.00	214 108 353
6.13	6.00	1.28	7.41	7.00	6.21	.....	6.21	5.00	1.54	1.23	24.67	.....	1858
8.66	8.00	1.28	9.94	9.00	1.38	.....	1.38	1.00	.75	.82	18.69	20.00 22.00	245 97 352
*7.67	8.00	2.06	9.73	9.00	4.58	.....	4.58	4.00	.84	.82	21.81	23.50 24.00 19.50	557 96 1208
9.38	8.00	.87	10.25	9.00	4.85	.....	*4.85	6.00	*1.78	2.47	27.55	.....	38
*6.55	7.00	2.09	8.64	8.00	4.58	.....	4.58	4.00	.82	.82	20.43	20.00 21.00 19.00	277 192 296
7.93	8.00	.87	*8.80	9.00	3.14	.....	3.14	2.00	.46	.41	15.70	18.00 16.50 15.00	190 151 1605
*7.75	8.00	1.57	9.32	9.00	3.53	.....	3.53	2.00	1.79	1.64	24.88	21.00 22.00 21.00	1319 576 1580
8.37	8.00	.62	8.99	9.00	9.27	.....	*9.27	10.00	1.83	1.64	31.12	30.00 28.00 32.00	191 141 575
*7.60	8.00	.94	*8.54	9.00	7.89	.....	7.89	5.00	1.83	1.00	29.11	22.00 22.00 16.00	911 142 1202
8.30	8.00	1.76	10.06	9.00	4.67	.....	*4.67	5.00	1.69	1.64	26.71	.....	1915
8.38	8.00	1.49	9.87	9.00	4.95	.....	4.95	4.00	2.40	2.46	29.62	25.00	899
8.15	8.09	1.85	10.00	9.00	4.45	.....	4.45	4.00	1.76	1.60	26.12	22.00	2197

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.		
1456	†Fish Guano,	H. B. Edwards & Co., Titusville,	7.25
1780		C. D. Bower & Bro., Berwick,	
1476	Garden Truck,	H. B. Hoon, Mercer,	8.78
10	General Favorite,	J. M. Owens, Strattonville,	13.68
1753	†Ideal Wheat and Corn,	Harmony Cereal Mills, Harmony,	9.60
1477		H. B. Hoon, Mercer,	
1991		D. H. Shivery, Bellefonte,	
170	Vegetable and Potato,	J. Wilson Hamilton, Meadville,	11.70
	JARECKI CHEMICAL CO., THE, SANDUSKY, OHIO.		
164	Fish Phosphate and Potash Tobacco and Potato Food.	C. S. Garwood, Linesville,	12.20
1459	Lake Erie Guano with Phosphate and Potash.	Clark Bros., Oil City,	9.93
2193	No. One Formula,	J. M. Raab & Bro., Midway,	5.35
	KEYSTONE BONE FERTILIZER CO., PHILADELPHIA, PA.		
1546	Keystone Corn and Cereal Grower,	Wm. M. Holbert, Warrington,	9.53
1777	Keystone Gold Medal Special,	P. K. Smith, Nescopeck,	6.33
661	†Keystone 20th Century Special,	E. A. Slagle, Paxinos,	7.10
1774		P. K. Smith, Nescopeck,	
	LANCASTER BONE FERTILIZER CO., LANCASTER, PA.		
819	†Complete Ammoniated Bone Manure,	A. L. Veit, McKean,	7.23
396		Daniel Replogle, Woodbury,	
1346		Josiah Thrichbaugh, Windsor,	
687	National Crop Grower,	J. H. Duttera, New Oxford,	10.43
373	†Potato, Fruit and Vegetable,	Chas. Oster, Elk Lick,	6.43
877		E. M. Wenger, Fredericksburg,	
874	†Potato, Tobacco and Truck Manure,	S. Z. Gettle, Myerstown,	7.33
1345		Josiah Thrichbaugh, Windsor,	
820	†Special Guano,	A. L. Veit, McKean,	5.83
1344		Josiah Thrichbaugh, Windsor,	
	LANCASTER CHEMICAL CO., LANCASTER, PA.		
772	General Crop Special, No. 15,	Emil Ward, Thompsontown,	9.58
773	Hard Times Fertilizer, No. 6,	Emil Ward, Thompsontown,	6.10
203	Keystone Brand, No. 11,	C. S. Winey, McAlisterville,	11.33
1115	No. 1 Tobacco and Vegetable,	J. B. Myers, Leola,	3.38
1116	No. 2 Dewey Brand for Tobacco and Spriug Crops.	J. B. Myers, Leola,	7.00
	LEBANON FERTILIZER WORKS, LEBANON, PA.		
500	Levan's Harvest Queen Fertilizer,	Horace Kintzel, Pine Grove,	5.05
876	Levan's Royal Potash Compound,	M. L. Bachman, Lebanon,	8.50
509	†Levan's Special Corn Fertilizer,	Ed. Mayberry, Pine Grove,	7.13
1071		Adam Gerhart, Rehresburg,	
1273	Levan's Special Potato and Tobacco,	Christian M. Brandt, Palmyra,	6.20
1255	†Levan's Special Truck Fertilizer,	C. F. Snyder, Snyders,	7.15
1796		Frank Gerhart, Orwigsburg,	
1273	Levan's Wheat and Grass Special,	Christian M. Brandt, Palmyra,	7.28
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
1056	†Lister's Corn and Potato Fertilizer.	Morrow & Buxton, Valencia,	9.63
1331		J. E. Smith, York,	
232	†Lister's G. Brand,	Knecht Milling Co., Parvin,	10.50
158		Wm. H. Schriver, Dillsburg,	
292		Uriah Daniel, Gratz,	
513		R. D. Sames, Coopersburg,	
791	†Lister's New York Special Fertilizer,	Uriah Daniel, Gratz,	9.45
773		R. J. Bigaman, Mifflinburg,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.84	9.00	2.00	10.84	10.00	2.65	.....	2.65	2.00	.87	.80	20.96	22.00 18.50	1456 1780
8.19	8.00	1.67	9.86	9.00	6.13	1.08	7.21	7.00	3.53	3.30	37.36	34.00	1476
7.91	8.00	1.78	9.69	9.00	5.31	.....	5.31	2.50	*.80	1.20	22.39	22.50	10
9.10	9.00	1.72	10.82	10.00	5.66	.....	5.66	5.00	1.84	1.60	28.70	24.00 25.50	1753 1477 1901
8.71	8.00	.89	9.60	9.00	8.37	.....	8.37	7.00	2.51	2.40	33.63	28.00	170
8.92	8.00	1.36	10.28	9.00	3.90	.....	3.90	4.00	1.21	.83	23.64	23.00	164
8.82	8.00	1.70	10.52	9.00	2.43	.....	2.43	2.50	1.22	1.25	22.16	26.00	1459
*6.88	8.00	2.06	8.94	9.00	2.06	.....	2.06	2.00	.94	.82	18.85	21.00	2198
*7.78	8.00	1.16	8.94	9.00	5.42	.....	5.42	4.00	1.72	1.65	26.17	27.00	1546
8.56	8.00	1.29	9.85	10.00	6.67	3.61	10.28	10.00	3.14	3.28	39.49	34.00	1777
8.01	5.00	1.05	9.06	6.00	10.42	.....	10.42	10.00	1.27	1.23	29.37	25.00 25.00	661 1774
7.95	8.00	.77	*8.72	9.00	2.45	.....	2.45	2.00	.86	.82	19.24	20.00 19.00 20.00	819 396 1846
9.39	8.00	.17	9.56	9.60	2.35	.....	2.35	1.00	.47	.41	15.68	16.50	637
*6.59	7.00	.37	*6.96	8.00	7.03	.....	7.03	7.00	*.46	.82	20.54	....	873 877
8.36	8.00	.45	8.81	9.00	7.77	.....	*7.77	8.00	1.61	1.60	28.34	28.50 22.00	874 1345
*6.58	7.00	.99	*7.57	8.00	4.27	.....	4.27	4.00	.81	.83	19.54	22.00 21.00	820 1344
8.99	8.00	1.89	10.88	9.00	1.33	4.08	*5.41	6.00	1.61	1.65	28.29	25.55	772
*7.13	8.00	3.76	10.89	9.00	2.00	.66	2.66	2.00	.65	.41	16.69	17.55	773
9.56	7.00	3.55	13.11	8.00	1.81	.....	1.81	1.00	.80	.82	18.04	.....	203
8.58	7.50	2.63	11.21	8.50	.53	5.57	*6.10	7.00	*1.57	2.06	29.05	30.50	1115
8.38	8.00	1.40	9.78	9.00	.66	3.71	4.37	4.00	1.18	1.23	24.44	22.50	1116
*7.28	8.00	2.01	9.29	9.00	8.53	.55	*9.08	10.00	*2.84	3.30	35.23	32.50	500
9.62	8.00	.36	9.98	9.00	5.65	.....	5.65	5.00	*1.43	1.65	26.78	24.00	876
8.17	8.00	.60	*8.77	9.00	2.97	.....	2.97	2.00	1.07	.82	20.80	16.00 18.75	559 1071
8.66	8.00	.66	9.32	9.00	6.11	.....	6.11	6.00	*1.27	1.65	25.40	23.00	1273
7.63	7.00	.73	8.36	8.00	10.50	.....	10.50	10.00	1.71	1.65	31.00	..... 26.00	1255 1796
*7.61	8.00	.76	*8.37	9.00	3.04	.....	3.04	1.50	1.35	1.23	21.78	18.00	1272
8.32	8.00	1.26	9.58	9.00	3.59	.....	3.59	3.00	1.66	1.65	24.72	25.50 24.00 22.00	1056 1331 232
7.81	8.00	1.73	9.54	9.00	4.06	.....	4.06	4.00	.85	.82	21.20	21.00 19.00 26.00	138 292 518
8.56	8.00	1.05	9.61	9.00	10.52	.....	10.52	10.00	.85	.82	28.22	24.00 23.00	291 779

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
1455	Lister's Pennsylvania Special,	Frank P. Allen, Titusville,	10.18
137	†Lister's Potato Manure,	Wm. H. Schriver, Dillsburg,	8.53
1449		D. W. Bortz, Greensburg,	
536	†Lister's Special 10% Potato Fertilizer,	T. H. Hoffman, Neffs,	10.65
293		Uriah Daniel, Gratz,	
974		Sylvester Garr, Easton,	
1103	Lister's Special Tobacco Fertilizer,	J. Frank Lutz, Stevens,	8.98
323	†Lister's Success Fertilizer,	P. C. Harned, Edinboro,	10.48
1058		Morrow & Buxton, Valencia,	
1057	Lister's 3-6-10 Potatoes,	Morrow & Buxton, Valencia,	7.25
967	†Lister's U. S. Super Phosphate,	Thos. Arndt, Danielsville,	8.70
656		Daniel Lahr, Dornsipe,	
1804		John Boyer, Klingerstown,	
	FREDERICK LUDLAM CO., BALTIMORE, MD.		
1297	Ludlam's Cecrops Fertilizers, A. B. F. Brand.	W. H. Caller, Allen,	10.53
1323	†Ludlam's Cecrops Fertilizer, Harvest Queen.	Sechrist & Ihrig, York,	9.30
1010		Wm. Albright, Cochranville,	
1903		G. C. Miller, Ax Mann,	
1309	†Ludlam's Cecrops Fertilizers, No. 2 for Grain and Grass.	Jacob Fleisher, Marysville,	8.75
1324		Sechrist & Ihrig, York,	
1236	†Ludlam's Cecrops Fertilizers, Potato and Tobacco.	A. A. Guss, Lewistown,	8.95
1326		Sechrist & Ihrig, York.	
1325	†Ludham's Cecrops Fertilizers, Spring Special.	Sechrist & Ihrig, York,	8.75
1011		Wm. Albright, Cochranville,	
1902		G. C. Miller, Ax Mann,	
157	Ludlam's Cecrops Fertilizers, Standard,	Amos T. Bushey, York Springs,	10.48
1308	†Ludlam's Cecrops Fertilizers, Standard Potash.	Jacob Fleisher, Marysville,	9.95
1327		Sechrist & Ihrig, York,	
	MAPES FORMULA AND PERUVIAN GUANO CO., THE, NEW YORK.		
1591	†The Mapes Average Soil Complete Manure.	W. H. Muth & Co., Lititz,	7.23
1704		Jacob Kech Sons, Kress,	
388	†The Mapes Economical Potato Manure,	H. S. Beidler, Doylestown,	5.83
1589		W. H. Muth & Co., Lititz,	
387	†The Mapes General Crop Brand,	H. S. Beidler, Doylestown,	5.13
1592		H. W. Muth & Co., Lititz,	
46	The Mapes Cereal Brand,	Hilles & Taggart, Norristown,	6.90
39	The Mapes Complete Manure for General Use.	Benj. Weidner,	6.37
1240	†Mapes Potato Manure,	A. F. Kimmell, Norristown,	5.60
375		Hilles & Taggert, Norristown,	
1644		Jno. Osterstock, Easton,	
1590	Mapes Tobacco Starter Improved,	W. H. Muth & Co., Lititz,	6.73
1594	Mapes Tobacco Manure (Wrapper Brand),	W. H. Muth & Co., Lititz,	4.80
446	†Mapes Top Dresser, Improved, Full Strength.	Hilles & Taggart, Norristown,	6.00
1241		A. F. Kimmel, Orwigsburg,	
1593	Mapes Top Dresser, Improved, Half Strength.	W. H. Muth & Co., Lititz,	7.20
	D. B. MARTIN CO., PHILADELPHIA, PA.		
1587	Martin's Bull Head Fertilizer for Cotton and Tobacco.	J. T. Fisher, Lancaster, R. D. 6	9.93
802	Martin's Corn and Cereal Special,	Chas. Zeller, Lewisburg,	9.30
347	†Martin's Gilt Edge Potato Manure,	J. H. Griegrich, Hershey,	9.33
1991		Lanc. Co. Farmers' Asso., Manheim,	
780	†Martin's One, Eight and Four,	Frank Rhule, Mifflinburg,	11.80
402		Ed. Houck, Bangor,	
1242		A. F. Kimmel, Orwigsburg,	
283	†Martin's Prize Potato,	David Reigel, Jonestown,	9.98
193		T. J. Novinger, Lewistown,	
400		Passmore & Co., Nottingham,	
401	†Martin's Special Compound,	Passmore & Co., Nottingham,	10.20
346		J. H. Gingrich, Hershey,	
542		Amandus Weating, Schneidersville,	
282	†Martin's Potato Manure,	David Reigel, Jonestown,	11.05
140		Cook & Co., Dillsburg,	
461		Ed. Houck, Bangor,	
463	Martin's Sure Grower,	Ed Houck, Bangor,	8.98

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
7.88	8.00	1.35	9.23	9.00	5.80	.....	5.80	5.00	1.29	.82	24.44	24.00	1455
*7.39	8.00	2.18	9.57	9.00	8.17	.....	8.17	7.00	3.64	3.29	37.94	35.00	137
												40.00	1440
												.....	536
7.82	8.00	2.17	9.99	9.00	9.33	1.79	11.12	10.00	1.61	1.65	32.49	26.50	293
												.....	974
9.64	8.00	1.15	10.79	9.00	4.45	.....	4.45	3.00	2.29	2.06	29.82	26.00	1103
8.84	9.00	1.38	10.22	10.00	2.35	.....	2.35	2.00	1.36	1.25	22.63	22.00	823
												24.50	1058
6.59	6.00	.64	7.23	7.00	9.99	.....	9.99	10.00	*2.15	2.47	31.45	34.00	1077
												.....	656
8.94	8.00	1.02	9.96	9.00	2.48	.....	2.48	2.00	1.07	1.03	21.36	20.50	967
												19.00	1804
8.59	8.00	1.21	9.80	9.00	2.23	.....	2.23	2.00	1.63	1.65	23.56	.....	1297
												18.65	1323
8.54	8.00	1.28	9.82	9.00	2.46	.....	2.46	2.00	.81	.82	19.87	21.00	1010
												20.00	1903
7.55	7.00	1.25	8.80	8.00	1.57	.....	1.57	1.00	.87	.82	18.16	.....	1309
												17.40	1324
8.08	8.00	1.75	9.83	9.00	10.00	.....	10.00	10.00	1.46	1.65	30.32	28.00	1236
												27.70	1326
												22.80	1325
9.38	9.00	1.05	10.43	10.00	7.96	.....	7.96	7.00	.81	.82	26.25	25.00	1011
												24.00	1902
8.18	8.00	1.47	9.65	9.00	5.67	.....	5.67	5.00	1.90	1.65	27.88	22.00	157
8.61	8.00	1.31	9.92	9.00	3.94	.....	3.94	4.00	.78	.82	21.48	.....	1308
												20.10	1327
7.17	7.00	2.13	9.30	.....	1.20	4.60	5.80	5.00	4.06	4.12	38.22	37.00	1591
												36.00	1704
*3.60	4.00	3.15	6.75	6.00	1.46	7.97	9.43	8.00	3.28	3.29	36.19	37.00	988
												37.00	1589
*6.90	8.00	2.98	9.88	10.00	2.78	.....	2.78	2.00	1.80	1.65	23.95	28.00	987
												24.00	1592
6.49	6.00	2.13	8.62	8.00	2.53	.96	3.49	3.00	1.76	1.65	23.83	30.00	46
9.53	8.00	2.07	11.60	10.00	4.13	.55	4.68	4.00	3.66	3.29	36.70	.....	39
												40.00	1240
*7.30	8.00	2.51	9.81	9.00	1.33	6.46	7.79	6.00	3.71	3.71	39.43	42.00	975
												35.00	1624
7.24	6.00	1.56	8.80	8.00	1.20	1.09	2.29	1.00	4.06	4.12	33.62	37.00	1590
2.71	.....	2.68	5.39	4.50	5.46	4.90	10.36	10.50	6.24	6.18	48.69	49.00	1594
5.97	5.00	2.86	8.83	8.00	.80	4.23	5.03	4.00	*9.21	9.88	60.01	58.00	446
												53.00	1241
2.83	2.50	2.04	4.87	4.00	.53	1.90	2.43	2.00	*4.73	4.94	32.89	31.00	1593
9.65	8.00	1.34	10.09	.....	3.84	.....	3.84	3.00	2.38	2.47	32.04	24.00	1587
8.55	8.00	2.45	11.00	.....	3.30	.....	3.30	2.00	1.64	1.65	25.20	.....	802
7.18	7.00	1.90	9.08	.....	10.73	.....	10.73	10.00	2.36	2.47	34.34	28.50	347
												28.00	1991
												.....	780
8.59	8.00	1 11	9.70	.....	4.72	.....	4.72	4.00	.98	.82	23.06	20.00	462
												18.00	1242
												26.00	283
7.93	8.00	1.91	9.84	.....	9.33	1.33	10.66	10.00	1.64	1.65	32.13	28.00	193
												27.00	400
												24.00	401
8.07	8.00	3.24	11.31	.....	5.40	.....	5.40	5.00	1.65	1.65	27.20	22.00	346
												23.00	542
												18.50	282
8.80	8.00	1.17	9.97	.....	5.32	.....	5.32	5.00	.85	.82	23.22	19.25	149
												21.00	461
8.26	8.00	1.21	9.47	.....	1.47	.....	1.47	1.00	1.03	.82	19.65	17.00	463

*Constituent falls below guaranty

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	MEDICUS FERTILIZER CO., INC., PHILADELPHIA, PA.		
1918	Medicus Corn and Potato Manure,	W. S. Buchman, Hatboro,	11.70
1917	Medicus Vegetable Guano,	W. S. Buchman, Hathoro,	12.28
	P. MEHRING, KEYMAR, MD.		
701	General Crop Grower,	J. N. Slifer, Littlestown,	6.40
702	Twenty-Six Dollar Phosphate,	J. N. Slifer, Littlestown,	6.63
	HENRY F. MICHELL CO., PHILADELPHIA, PA.		
55	Michell's High Grade Ammoniated Phosphate.	Henry F. Michell, Philadelphia,	5.90
	MILLER FERTILIZER CO., THE, BALTIMORE, MD.		
804	Club Brand,	A. P. Forseman, Allenwood,	8.63
236	†Farmer's Profit,	W. L. Wolfe, Boonville,	7.73
290		O. B. Esh, Spruce Hill,	
503		John A. Miller, Pine Grove,	
275	†Harvest Queen Phosphate,	Biglerville Warehouse Co., Biglerville.	7.85
218		O. B. Esh, Spruce Hill,	
1390		J. M. Lutz, Shirleysburg,	
1312	†Hustler Phosphate,	Wm. Overdorff, Windsor,	7.18
1947		Miller T. Hoskins, Hickory Hill,	
1362	†Plmlico,	J. H. Bartenslager, Stewartstown,	5.83
504		Jno. A. Miller, Pine Grove,	
1875		Jacob F. Good, Midvale,	
1207	Potato Vegetable Grower,	Howard Kliegle, Selinsgrove,	5.40
1950	Standard Phosphate,	Miller T. Harkins, Hickory Hill,	4.28
1300	†W. G. Phosphate,	J. R. Miller's Sons, New Kingston,	6.80
1335		Brillinger & Swartz, Ernigsville,	
	NASSAU FERTILIZER CO., NEW YORK.		
524	†Common Sense Potato Manure,	Wm. H. Hoffman, New Tripoli,	10.35
384		P. B. Corle, Piara,	
1205		S. J. Straub, Selinsgrove,	
552	†General Favorite,	Clinton Crammes, Trexlertown,	9.50
379		Ross Stoucker, St. Clairsville,	
662		Chas. Usher, E. Smithfield,	
1246	Old Hickory,	M. D. Wittimer, Pine Grove,	7.93
525	†Special Potato Fertilizer,	Wm. H. Hoffman, New Tripoli,	8.45
672		Chas. Usher, E. Smithfield,	
	G. OBER & SONS CO., BALTIMORE, MD.		
1853	Ober's Sea Island Fish Guano,	A. H. Ulsh, Millerstown,	5.05
366	†Ober's Special Plant Food,	Shipley Hdw. Co., Meyersdale,	7.83
622		D. Blocher & Co., Gettysburg,	
650	†Ober's Stag Guano,	Jno. Phillips, Sunbury,	5.98
621		D. Blocher & Co., Gettysburg,	
950		S. S. Mosholder, Rockwood,	
	OXFORD PACKING WORKS, OXFORD, PA.		
58	O. P. W. No. 4,	Geo. Brogan, Nottingham,	12.05
	OYLER & SPANGLER, GETTYSBURG, PA.		
626	Acidless,	Oyler & Spangler, Gettysburg,	4.05
	PATAPSCO GUANO CO., BALTIMORE, MD.		
766	†Patapsco B. B. & P.,	Jno. Harley, Thompsontown,	9.58
454		Wm. Hummer, Martin's Creek,	
934		P. J. Blough's Sons, Hooversville,	
1171	Patapsco Best Grade Fertilizer,	E. H. Meeker, Willawanna,	7.98
320	†Coon Brand Guano,	Russell Bros., Washington,	13.85
173		Kramer & Son, Springboro,	
620		E. C. Thomas, Gettysburg,	
319	†Patapsco Corn and Tomato Fertilizer,	Russell Bros., Washington,	11.93
175		Kramer & Son, Springboro,	
800		R. E. Hamer, Lewisburg,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.						
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.	Found.	Guaranteed.			
*7.45	8.00	2.72	10.17	.....	11.57	.....	11.57	10.00	*1.25	1.65	30.78	27.00	1918
7.74	6.00	3.29	11.03	.....	7.20	.....	7.20	6.00	*1.32	1.65	27.16	23.00	1917
10.99	10.00	4.23	15.22	11.00	2.46	.....	2.46	1.50	1.20	.82	25.60	17.00	701
12.32	11.00	2.52	14.84	12.00	2.81	.....	2.81	1.50	1.33	1.24	27.21	19.00	702
10.22	‡8.50	3.41	13.63	.....	1.68	.....	1.68	1.00	1.86	1.65	26.66	25.00	55
8.18	8.00	.51	8.69	8.50	2.27	.....	2.27	2.00	.52	.42	17.58	15.00	804
8.27	8.00	.73	9.00	8.50	5.18	.....	5.18	5.00	.94	.83	22.81	22.00 19.50 20.00 21.00	236 220 503 275
9.38	9.00	.51	9.89	9.50	3.30	.....	3.30	2.75	1.02	1.03	22.16	19.25 22.50	218 1390
8.09	8.00	.99	9.08	8.50	1.20	.....	1.20	1.00	.84	.83	18.25	18.00 19.00	1342 1947
8.58	8.00	.70	9.28	8.50	6.26	3.59	9.85	10.00	2.06	1.65	33.78	27.00 27.50 28.00	1362 504 1875
8.26	8.00	1.08	9.34	8.50	3.90	.....	3.90	4.00	*.86	1.65	21.20	.....	1207
8.70	8.00	.80	9.50	8.50	3.32	.....	3.32	3.00	*1.93	2.47	22.69	98.00	1950
7.75	7.00	.88	8.63	7.50	1.79	.....	1.79	1.00	.52	.42	19.42	15.80 15.00	1300 1335
8.77	8.00	1.15	9.92	9.00	4.11	.....	4.11	4.00	1.58	1.65	25.36	24.00 26.00 22.50	524 384 1205
8.57	8.00	1.36	9.93	9.00	4.46	.....	4.46	4.00	.86	.82	22.23	19.75 ..... 22.50	553 379 663
10.53	10.00	.88	11.41	11.00	7.92	.....	7.92	8.00	1.00	.82	28.20	.....	1246
8.25	8.00	1.36	9.61	9.00	9.60	.20	*9.80	10.00	1.66	1.65	31.03	27.00 31.00	525 672
*7.36	8.00	2.64	10.00	9.00	10.46	.....	10.46	2.00	1.70	1.65	31.58	21.00	1853
9.23	9.00	.66	9.89	10.00	6.35	.....	6.35	5.00	*1.28	1.65	26.55	28.00 25.00	366 622
7.94	8.00	.50	*8.44	9.00	5.75	.....	5.75	4.00	.78	.82	22.27	20.00 21.00 18.75	650 621 950
10.08	10.00	1.20	11.28	.....	3.28	.....	3.28	3.00	.61	.41	18.21	.....	58
*5.96	7.00	4.10	10.06	9.00	8.66	.....	8.66	8.00	*2.16	2.47	31.06	30.00	626
8.93	8.00	.78	9.73	9.00	2.43	.....	2.43	2.00	.47	.41	15.68	16.00 18.00 19.00	766 454 934
7.97	8.00	1.44	9.41	9.00	10.87	.....	10.87	10.00	3.17	3.24	38.64	39.00	1171
9.57	9.00	1.06	10.63	10.00	3.18	.....	3.18	3.00	.75	.82	21.38	23.00 22.50 20.00	320 173 620
9.25	9.00	1.47	10.72	10.00	2.13	.....	2.13	2.00	1.21	1.23	22.20	28.00	319 175 800

*Constituent falls below guaranty
‡Guaranteed soluble phosphoric acid.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
768	Patapsco Corn, Oats and Clover Compound.	John Harley, Thompsontown, ...	8.80
629	Patapsco Early Trucker for Quick Growth,	Walter & Frederick, Montandon, ...	7.38
1194	†Patapsco Fish Guano, ...	Geo. W. Robinson, Allenwood, ...	8.13
1859		E. S. Brunner, New Bloomfield, ...	
745		W. B. Thom, Hdwr. Co., Tarentum,	
321	†Patapsco Grain and Grass Producer, ...	Russell Bros., Washington, ...	11.40
1173		E. H. Meeker, Wilawana, ...	
618		E. S. Thomas, Gettysburg, ...	
453	†Patapsco Potato Manure, ...	Wm. Hummer, Martin's Creek, ...	7.45
1147		Veith Bros., Ebensburg, ...	
1169	Patapsco Premium Super Phosphate, ...	Jas. McNamara, Cadis, ...	9.30
174	Patapsco Tobacco and Potato Fertilizer,..	Kramer & Son, Springhoro, ...	10.08
	PAN AMERICAN FERTILIZER CO., NEW YORK.		
1013	Perkins Monarch Phosphate, ...	Pan American Fert. Co., New York,	6.68
	PETER'S PACKING CO., McKEESPORT, PA.		
753	Peter's 7-2-3 Producer, ...	Peter's Packing Co., McKeesport,...	4.75
34	Tube City Brand Animal Fertilizer,.....	T. E. Painter, Irwin, ...	7.73
	J. D. PERKINS, COATESVILLE, PA.		
1013	Perkins Monarch Phosphate, ...	Edw. Tingley, New London, ...	6.98
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.		
125	†Insular Guano for all Crops, ...	A. F. Stutzman & Co., Johnstown,..	4.13
1852		A. H. Ulsh, Millerstown, ...	
235		D. T. Stitzel, York Springs, ...	
124	†Piedmont Pennsylvania Grain Grower,..	A. F. Stutzman & Co., Johnstown,.	6.43
370		Jas. Maust, Elk Lick, ...	
369		Jas. Maust, Elk Lick, ...	
123	†Piedmont Pennsylvania Potato Producer,	A. F. Stutzman & Co., Johnstown,...	5.40
885		M. G. Adams, Paximos, ...	
158	†Piedmont Perfection Guano, ...	D. F. Stitzel, York Springs, ...	8.70
350		B. F. Sheesley, Penbrook, ...	
1400	Piedmont Success, ...	J. G. Simpson, Huntingdon, ...	5.35
	PIONEER FERTILIZER CO., CLEVELAND, OHIO.		
18	Pioneer 2-8-10 Fertilizer, ...	Wm. H. Roadhouse, Greenville,.....	11.23
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURGH, PA.		
307	Lawn Fertilizer, ...	Scobie, Parker & Co., Pittsburgh, ..	4.78
32	Smith's Grower, ...	A. W. Smith Co., Pittsburgh, ...	1.57
2029	Special Potato Fertilizer, ...	Ira D. Reed, Moravia, ...	3.80
	POLLOCK FERTILIZER CO., BALTIMORE, BY THE A. C. C. CO., NEW YORK.		
920	Ammoniated Super Phosphate, ...	Frances Baker, Everett, ...	9.48
1350		S. A. Barshinger, Red Lion, ...	
692		J. H. Kelly, Littlestown, ...	
390	†Crop Invigorator, ...	Jno. L. Bortz, Bedford, ...	10.25
912		D. W. Diebert, Bedford, ...	
1007		Harvey Spencer, Cochranville, ...	
395	†Special Potato and Tobacco Fertilizer, .	J. L. Longenecker, Woodbury, ...	9.35
908		L. W. Egolf, Schellsburg, ...	
1387		Angustus Storr, Orbisonia, ...	
698	†Special Wheat and Corn Fertilizer, ...	J. H. Kelly, Littlestown, ...	9.68
1849		E. C. Mengle, Liverpool, ...	
	RAMSBURG FERTILIZER CO., THE, FREDERICK, MD.		
705	Ammoniated Phosphate, ...	Humber & Kreig, Littlestown, ...	12.60
707	†Old Virginia Compound, ...	Humbert & Krieg, Littlestown, ...	9.95
1873		Franklin Miller & Son, Greencastle,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
*9.41	10.00	1.04	*10.45	11.00	6.00	2.13	8.13	8.00	.53	.....	22.89	19.50	768
7.63	7.00	1.29	8.92	8.00	5.61	.....	5.61	5.00	*3.89	4.11	36.30	35.00	639
7.80	6.00	.97	8.77	7.00	2.44	.....	2.44	2.00	1.62	1.65	22.60	.....	1194
												22.00	1859
												24.00	745
8.59	8.00	1.48	10.07	9.00	4.29	.....	4.29	4.00	1.09	.82	23.28	28.00	321
												24.00	1173
												25.00	618
5.23	5.00	1 54	6.77	6.00	10.02	.....	10.02	10.00	1.50	1.65	27.49	26.00	453
												27.00	1147
*7.15	8.00	2.68	9.83	9.00	11.14	.....	11.14	10.00	1.61	1.65	31.66	28.66	1169
7.84	8.00	1.40	9.24	9.00	7.86	.....	7.86	4.00	1.61	1.65	28.38	26.00	174
*7.09	8.00	2.35	9.44	9.00	4.07	.....	4.07	4.00	1.65	1.64	24.43	.....	1518
8.91	7.00	4.87	13.78	12.50	2.62	.....	*2.62	3.00	3.78	2.00	35.84	28.00	753
9.45	7.00	4.18	13.63	13.00	2.00	2.15	4.15	4.00	3.75	3.00	37.90	.....	34
10.02	10.00	.89	10.91	.....	5.96	.....	5.96	5.00	1.37	1.23	27.26	.....	1013
7.04	7.00	.74	7.78	.....	2.39	.....	2.39	2.00	.55	.41	16.90	19.00	125
												16.09	1852
												18.00	255
7.41	7.00	.89	8.30	.....	4.93	.....	4.93	5.00	.94	.82	21.76	24.00	124
												.....	370
												.....	369
6.70	6.00	1.36	8.06	.....	10.36	.....	10.36	10.00	1.46	1.65	29.06	30.00	123
												26.00	885
8.58	8.00	.66	9.24	.....	5.80	.....	5.80	5.00	*1.30	1.65	25.33	20.00	158
												28.00	350
8.85	9.00	.73	9.58	.....	4.72	.....	*4.72	5.00	.71	.21	21.78	18.00	1400
8.73	8.00	.88	9.61	9.00	8.40	2.45	10.95	10.00	1.51	1.65	32.25	31.00	18
7.48	4.00	7.32	*14.89	16.00	2.23	.....	2.23	1.50	*2.63	2.87	29.94	40.00	307
4.85	.....	‡2.75	7.60	.....	4.42	.....	*4.42	5.00	5.05	4.52	38.18	††300.00	32
10.58	9.00	1.93	12.51	10.00	3.06	4.17	7.23	7.00	*1.34	1.64	30.68	28.00	2089
8.49	8.00	1.34	9.83	9.00	2.65	.....	2.65	2.00	2.19	1.65	26.46	22.00	920
												21.00	1350
												19.00	699
8.61	8.00	1.22	9.83	9.00	4.23	.....	4.23	4.00	.85	.82	21.96	22.00	390
												21.00	912
												24.00	1007
8.13	8.00	1.34	9.47	9.00	4.41	.....	4.41	4.00	1.76	1.65	25.78	25.00	395
												22.00	908
												.....	1387
8.31	8.00	1.27	9.58	9.00	2.12	.....	2.12	2.00	.77	.82	1909	17.00	698
												18.00	1849
10.86	10.00	3.19	14.05	.....	2.44	.....	2.44	2.00	.81	.82	23.14	18.00	705
10.22	8.00	2.36	12.58	.....	4.25	.....	4.25	4.00	1.06	1.00	25.10	20.00	707
												19.00	1873

*Constituent falls below guaranty.
††Fifteen cents per pound.
‡Guaranteed 5% insoluble.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	RASIN MONUMENTAL CO., BALTIMORE, MD.		
373	†Rasin's Empire Guano,	Chas. Oester, Elk Lick,	7.80
1618		H. B. Low & Son, Orangeville,	
299		W. W. Book, Port Royal,	
112	†Rasin's Genesee Valley Root Manure,	Chas. Yaeckle, Patton,	10.08
1504		S. C. Walker & Co., Chadds Ford Junction.	
168	†Rasin's I. X. L. Fertilizer,	J. Wilson Hamilton, Meadville,	10.55
188		C. B. McCormick, State College,	
1311		J. D. Markle, Hanover,	
111	†Monumental Potato Manure,	Chas. Yaeckle, Patton,	8.10
1619		H. B. Low & Son, Orangeville,	
622		J. R. Weaver & Bro., New Oxford,	
203	†Rasin's National Crop Compound,	W. W. Book, Port Royal,	12.30
956		Oliver Ullur, Tatamy,	
215		W. W. Book, Port Royal,	
169	†Rasin's Royal Fish, Bone and Potash,	J. Wilson Hamilton, Meadville,	9.60
535		Edw. D. Leibold, Sagersville,	
212		W. W. Book, Port Royal,	
113	†Rasin's Vegetable Special,	Chas. Yaeckle, Patton,	9.20
327		Dr. N. W. Troup, Elizabethville,	
1227	†Wm. Penn Crop Grower,	S. C. Walker & Co., Chadds Ford Junction.	6.80
1506		Isaac Shirey, McClure,	
206		W. W. Book, Port Royal,	
68	†Rasin's Wheat, Corn and Oats Mixture,	L. A. Geiger, Joanna,	9.70
824		W. A. Porter, Cambridge Springs,	
534		Edw. D. Leibold, Sagersville,	
167	†Rasin's X. X. X. Fertilizer,	J. Wilson Hamilton, Meadville,	9.08
869		Elias S. Brubacker, Richland,	
	READING BONE FERTILIZER CO., READING, PA.		
870	Farmer's Tankage and Potash for Corn, Grain and Grass.	C. R. Bucher, Myerstown,	7.75
386		J. H. Moses, Osterburg,	
257	†Farmer's Union Fertilizer,	S. B. Alcott, Ursina,	8.68
432		M. B. Hickman, West Chester,	
893		Chas. Poke, Catawissa,	
614	†Gilt Edge Potato and Tobacco Grower,	Jacob Meck, Meckville,	8.65
982		A. K. Kulp, Pottstown,	
288	†Never Fail Crop Grower,	Emma Wenger, Jonestown,	9.30
603		Jacob D. Moyer, Bechtelsville,	
9	Reading Prize Winner,	R. W. Ferguson, Jersey Shore,	10.33
110	Reading Special Potato and Tobacco Manure.	A. F. Bauer, Hamburg,	7.03
600		Jno. W. Slipp, Birdsboro,	
555	†Sterling Potato Grower,	Harvey Buss, Allentown,	9.08
1397		S. T. Smith, Mill Creek,	
1490	†Tobacco and Truck Special,	Equity Cooperation Co., Covington,	6.08
1985		B. H. Hershey, Manheim,	
	ROBERT A. REICHARD, ALLENTOWN, PA.		
514	Golden Harvest Phosphate,	Jno. Eisenhart, Macungie,	4.90
515	†Lehigh Potato Manure,	Jno. Eisenhart, Macungie,	7.58
958		E. J. Gerlauch, Bethlehem,	
563	†Peerless Phosphate,	Weston Kern, Emerald,	5.88
959		E. J. Gerlauch, Bethlehem,	
517	†Trucker's Favorite,	Jno. Eisenhart, Macungie,	5.43
957		E. J. Gerlauch, Bethlehem,	
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.		
1689	Royster's Big Chief Tobacco Guano,	A. W. & J. H. Mentzer, Ephrata,	5.80
533		Amandes Wootring, Schnecksville,	
491	†Royster's Big Yield Potato Producer,	C. E. Drake, Athens,	4.48
1107		L. K. Gruber, Reinholds,	
539	†Royster's Challenge Complete Compound,	Amandes Wootring, Schnecksville,	7.88
1488		J. D. Morris, Covington,	
1092	†Royster's Champion Crop Compound,	A. W. & J. H. Mentzer, Ephrata,	7.58
1932		Geo. K. Watson, Embreville,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.57	8.00	1.76	10.33	9.00	2.23	.....	2.23	2.00	2.03	1.65	25.65	.....	371
												20.00	1618
8.56	8.00	1.95	10.51	9.00	9.46	1.41	10.87	10.00	.76	.82	28.88	26.00	209
												22.50	112
9.48	9.00	3.10	12.58	10.00	3.16	.....	3.16	3.00	1.06	.82	23.59	26.00	1504
												21.00	168
												19.50	188
6.05	6.00	2.77	8.82	7.00	7.71	.....	7.71	7.00	1.46	1.65	26.36	25.00	1311
												23.00	111
												24.00	1619
9.27	8.00	2.78	12.05	9.00	4.25	.....	4.25	4.00	.81	.82	23.16	18.00	632
												21.00	208
												.....	956
8.27	8.00	3.51	11.78	9.00	3.83	.11	3.44	3.00	1.51	1.65	24.94	23.00	211
												23.00	169
												21.00	535
												23.00	212
8.01	8.00	2.93	10.94	9.00	4.00	5.86	9.86	10.00	1.46	1.65	32.04	26.00	113
												25.00	327
9.69	8.00	1.93	11.62	9.00	.99	.....	.99	1.00	.86	.82	20.11	17.50	1227
												20.00	1506
												17.00	206
8.47	8.00	1.87	10.34	9.00	1.84	.....	1.84	2.00	.43	.41	15.13	15.00	68
												18.75	824
												22.00	534
8.48	8.00	2.93	11.41	9.00	4.40	.98	5.38	5.00	*1.43	1.65	26.79	24.00	167
												23.84	860
*7.32	8.00	2.36	9.68	9.00	4.31	.....	4.31	4.00	.81	.82	21.07	19.50	870
												28.00	386
8.69	8.00	1.90	10.59	9.00	9.26	.....	9.26	8.00	*1.42	1.64	30.01	36.00	351
												27.00	432
												26.00	893
7.10	7.00	2.86	9.96	8.00	8.66	2.52	11.18	10.00	1.63	1.64	32.58	26.00	614
												31.00	982
*7.74	8.00	2.85	10.59	9.00	1.53	.....	1.53	1.00	.86	.82	19.14	18.00	288
												20.00	608
9.85	9.00	.96	10.81	10.00	8.40	3.45	11.85	12.00	*2.13	2.46	37.64	37.00	9
6.46	6.00	2.37	8.83	7.00	6.70	.....	*6.70	7.00	.77	.82	22.42	24.00	110
												30.00	600
8.43	8.00	.91	9.34	9.00	10.95	.....	10.95	10.00	.86	.82	28.50	.....	555
6.41	6.00	1.49	7.90	7.00	6.58	.....	6.58	6.00	2.53	2.46	30.01	26.50	1397
												29.00	1490
												29.00	1985
*7.19	8.00	2.52	*9.71	10.00	5.65	.....	5.65	5.00	*1.44	1.64	25.32	23.75	514
8.09	8.00	1.25	*9.34	10.00	10.73	.....	10.73	10.00	1.62	1.64	31.53	28.50	515
												32.00	958
7.99	8.00	1.28	*9.27	9.50	4.62	.....	4.62	4.00	.81	.82	21.50	20.00	566
												22.00	959
6.84	6.00	1.05	7.89	7.50	8.35	.....	8.35	8.00	3.20	3.28	35.00	34.50	513
												36.00	957
8.18	8.00	1.66	9.84	8.50	2.80	6.37	*9.17	10.00	2.06	1.65	33.76	29.00	1089
												25.00	538
5.26	5.00	1.45	6.71	5.50	4.93	5.28	10.21	10.00	1.66	1.65	29.64	28.00	491
												27.00	1107
7.95	8.00	1.38	9.33	8.50	5.06	.39	*5.45	6.00	1.58	1.65	26.13	24.00	539
												25.75	1488
8.15	8.00	1.68	9.83	8.50	4.54	.....	4.54	4.00	1.65	1.65	25.70	22.50	1092
												24.00	1932

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
134	Royster's Complete Potato Manure, ...	Abraham Hostetler, Johnstown, ...	7.88
659	†Royster's Farmer's Delight Fertilizer,..	Dan. L. Latsha, Red Cross, ...	6.23
1383		Huston Bros., Three Springs, ...	
1352		G. B. Murphy, Red Lion, ...	
540	†Royster's Fish, Flesh and Fowl, ...	Amandes Wootring, Schnecksville, ..	7.30
1636		Homer Woodringer, Walnutport, ...	
1651	Royster's General Crop Fertilizer, ...	McCauley, McKay & Co., Brockwayville.	4.78
537		Amandes Wootring, Schnecksville, ..	
364	†Royster's Gold Seal Potato Special,.....	H. L. Tike, Meyersdale, ...	7.55
660		Dan. L. Latsha, Red Cross, ...	
1135		Preston Bros, Troy, ...	
657	†Royster's Harvest King Fertilizer,....	Dan. L. Latsha, Red Cross, ...	7.70
1763		J. J. Barnhardt, Harmony, ...	
1414	Royster's Hay and Grain Fertilizer, ...	Reynoldsville Hardware Co., Reynoldsville.	6.88
362		H. L. Tike, Meyersdale, ...	
248	†Royster's Lehigh Potato Grower, ...	J. L. Ditzler, Milton, ...	7.50
1924		H. A. Mendenhall, Toughkenamon,.	
869	Royer's Practical Truck Guano, ...	S. A. Phillippy, Schaefferstown,...	8.83
1044		O. P. Beehe, Montrose, ...	
567	†Royster's Prolific Potato Producer, ...	Abraham Hostetler, Johnstown, ...	5.98
1669		Jno. A. McKee & Son, Clarion, ...	
1033	Royster's Seeding Down Special Fertilizer,	B. J. Dougherty, Meshoppen, ...	8.78
129	Hostetler's Special Fruit and Truck	Abraham Hostetler, Johnstown, ...	7.05
932	Mixture.	Weaver & Berkey, Windber, ...	
1790	Royster's Trucker's Favorite, ...	R. J. Dunham, Wellsboro, ...	4.35
890	Royster's Universal Crop Grower, ...	N. C. Creasy, Catawissa, ...	5.00
708		Humbert & King, Littlestown, ...	
492	†Royster's Wheat, Oats and Barley Fertilizer.	C. E. Drake, Atheus, ...	7.83
889		N. C. Creasy, Catawissa, ...	
	SCHALL-SHELDON FERTILIZER CO., BUFFALO, N. Y.		
1903	Schaal's Corn and Potash, ...	Harry C. Shirk, Centre Hall, ...	2.00
828	Guano, ...	Brooklyn Milling Co., Spartanburg,	10.50
21	Schaal's Standard, ...	J. W. Morrison, Transfer, ...	10.10
1905	Trucker's Manure, ...	Harry C. Shirk, Centre Hall, ...	3.20
	SCOTT'S FERTILIZER CO., THE, ELKTON, MD.		
283		E. D. Houser, Grantville, ...	
84	†Scott's Corn and Oats Grower, ...	Levi Beiler, Elverson, ...	6.50
1942		Wm. C. Halbrook, Ercildown, ...	
285		E. D. Houser, Grantville, ...	
85	†Scott's Potato and Truck Special, ...	Levi Beiler, Elverson, ...	8.85
523		Wm. H. Hoffman, New Tripoli, ...	
284		E. D. Houser, Grantville, ...	
85	†Scott's Potato Grower, ...	Levi Beiler, Elverson, ...	7.45
522		Wm. H. Hoffman, New Tripoli, ...	
858	†Scott's Sure Growth Compound, ...	Elias S. Bruhacher, Richlands,.....	9.98
1529		S. T. Erwiu, Somertou, ...	
1094	Scott's Sure Growth Super Phosphate,....	M. R. Royer, Ephrata, ...	7.93
	M. L. SHOEMAKER & CO., PHILADELPHIA, PA.		
49	Echo Super Phosphate, ...	Chester A. Snyder, Weissport, ...	8.14
51	Twenty-Three Dollar Super Phosphate,.....	A. B. Weisel, Quakertown, ...	6.03
989		H. S. Beidler, Doylestown, ...	
81	†Shoemaker's Swift Sure Guano for To-	L. A. Geiger, Joanna, ...	9.23
1768	matoes, Truck and Corn.	J. C. Wyman, Dallas, ...	
411	Shoemaker's New Jersey Special for Oats,.	Jas. K. Lewis, Honeybrook, ...	5.48
101	†Shoemaker's Special 10% Potato Fertilizer	Stephen M. Stoltzfus, Morgantown,.	8.31
1528	No. 1.	W. E. Erwin, Somerton, ...	
100	Shoemaker's Special 10% Potato Fertilizer, No. 2.	Stephen M. Stoltzfus, Morgantown,	8.13
1017	Swift Sure Super Phosphate for General Use.	W. E. Erwin, Somerton, ...	6.85
601	†Swift Sure Super Phosphate for Pota-	Charles Geiger, Scharlets Mills,.....	7.60
360	toes.	Mr. Kuntz, Tricklers, ...	
99	Swift Sure Super Phosphate for Tobacco,..	Stephen M. Stolzfus, Morgantown, ..	....

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.						
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.	Found.	Guaranteed.			
6.29	6.00	1.66	7.95	6.50	11.59	.....	11.59	10.00	3.44	3.29	39.21	32.00	134
8.13	8.00	1.24	9.37	8.50	2.13	.....	2.13	2.00	.48	.41	15.16	17.00	659
												12.40	1383
												21.00	1352
8.15	8.00	1.28	9.43	8.50	3.61	.....	3.61	3.00	1.69	1.65	24.76	22.00	540
												20.00	1636
8.97	8.00	1.50	10.47	8.50	6.63	.....	6.63	5.00	1.63	.82	28.56	22.00	1651
												27.00	573
7.87	8.00	2.08	9.95	8.50	8.66	1.69	10.35	10.00	1.54	1.65	31.45	26.45	364
												28.00	660
												22.50	1185
*7.49	8.00	1.92	9.41	8.50	3.03	.....	3.03	2.00	1.62	1.65	23.37	23.50	657
												24.00	1763
*8.88	10.00	2.59	11.47	10.50	10.13	.33	10.46	10.00	1.70	1.65	33.16	31.00	1414
												26.60	363
7.10	7.00	1.57	8.67	7.50	10.80	3.37	*14.17	15.00	1.13	.82	32.88	26.00	248
												30.00	1924
8.01	8.00	1.72	9.73	8.50	6.27	.....	6.27	6.00	2.34	2.47	30.51	28.50	869
												25.00	1044
6.49	6.00	1.59	8.08	6.50	4.13	1.09	5.22	5.00	1.77	1.23	25.36	22.00	567
												26.00	1669
9.39	9.00	.87	10.26	9.50	3.09	.....	3.09	3.00	.82	.82	21.21	23.00	1033
*6.93	7.25	9.32	16.25	16.00	5.33	2.76	8.09	8.00	2.16	1.85	34.69	31.00	129
												31.00	932
8.06	8.00	2.11	10.17	8.50	5.82	.....	5.82	5.00	5.15	4.94	43.02	40.00	1700
*6.39	7.00	2.07	8.46	7.50	1.20	.....	1.20	1.00	1.01	.82	17.70	18.00	890
												17.00	708
7.94	8.00	1.28	9.22	8.50	2.00	.33	2.33	2.00	1.01	.82	20.16	21.00	492
												19.00	889
8.01	8.00	2.41	10.42	9.00	4.62	.....	4.62	4.00	1.60	1.65	25.70	24.00	1906
8.41	8.00	.95	9.36	9.00	4.17	.....	4.17	4.00	.86	.82	21.54	23.00	828
*7.96	8.00	2.42	9.48	9.00	2.43	.....	2.43	2.00	1.80	1.65	23.50	21.65	21
9.24	8.00	1.30	10.54	9.00	8.19	.....	8.19	6.00	2.29	2.47	33.31	30.00	1905
												15.50	286
8.08	8.00	1.68	9.76	.....	3.26	.....	3.26	2.00	.81	.41	20.42	14.95	84
												17.00	1942
												22.00	285
9.50	7.00	1.63	11.13	.....	5.40	.....	5.40	5.00	*1.31	1.65	26.32	21.50	85
												26.00	523
												24.50	284
8.79	6.00	1.68	10.47	.....	*7.20	2.89	10.09	10.00	1.86	1.65	33.63	24.50	83
												27.00	522
7.54	7.00	.98	8.52	.....	7.41	.....	7.41	7.00	3.21	3.30	34.70	32.00	858
												36.00	1529
9.26	8.00	1.76	11.02	.....	3.75	.....	3.75	3.00	1.70	1.65	26.25	24.00	1094
10.00	7.00	3.77	13.77	10.00	2.68	.....	2.68	1.50	1.61	1.23	26.45	20.50	49
8.29	6.00	3.44	11.73	9.00	2.44	.....	2.44	1.25	1.19	1.03	22.50	.....	51
												26.00	989
9.04	8.00	2.87	11.91	10.09	3.60	2.51	6.11	5.00	2.09	1.65	31.40	24.00	81
												24.00	1768
9.29	8.00	3.70	12.99	11.00	2.50	.....	2.50	2.00	1.54	.82	25.29	21.00	441
8.16	6.00	2.09	10.25	8.00	2.80	6.30	*9.10	10.00	*3.16	3.30	38.89	32.00	101
												34.00	1528
9.41	8.00	2.22	11.63	10.00	5.86	5.67	11.53	10.00	1.81	1.65	36.43	27.00	100
10.26	9.00	4.12	14.38	12.00	5.36	.....	5.36	4.50	2.72	2.88	34.65	30.00	1017
9.48	8.00	3.78	13.26	11.00	6.66	.78	7.44	7.00	2.77	2.88	36.19	.....	601
												29.00	960
10.04	8.00	2.58	12.62	11.00	.66	4.93	5.59	4.50	2.92	2.88	36.02	31.00	99

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	SMITH AGRICULTURAL CHEMICAL CO., THE, COLUMBUS, OHIO.		
177	Ohio Farmer's Ammoniated Phosphate and and Potash.	C. R. Forbes, Albion,	7.95
178	Ohio Farmer's Corn, Oats and Wheat Fertilizer.	C. R. Forbes, Albion,	8.23
15	Ohio Farmer's Potato and Tobacco Special.	N. P. Hayes, Edinboro,	6.92
14	†Ohio Farmer's Wheat Maker and Seed-	N. P. Hayes, Edinboro,	6.73
17	ing Down.	Geo. J. Abbey, West Springfield,	
	SOUTHERN FERTILIZING CO., YORK, PA.		
526	†Southern Fertilizing Co. Potato, Truck	Henry Weaver, New Tripoli,	8.45
1305	and Tobacco Fertilizer.	J. H. Koller, Mechanicsburg,	
527	Southern Fertilizing Co. Wheat, Corn and Grass Grower.	Henry Weaver, New Tripoli,	7.05
	SWACK'S FERTILIZER WORKS, DUBOIS, PA.		
2235	Swack's General Crop Grower,	J. W. Moore's Farm, Corsica,	10.38
2120	Swack's Grain and Corn Fertilizer,	G. A. Towns, Penfield,	5.65
	SWIFT & COMPANY, BALTIMORE, MD.		
1249	Swift's Pure Diamond E. Fertilizer,	Jas. Guldner, Tamaqua,	7.08
1380		J. P. Kocker, Wrightsville,	
738	†Swift's Pure Diamond C. Fertilizer,	J. Osterling & Son, Butler,	7.30
1568		H. W. Siegrist, Gap,	
1250		Jas. Guldner, Tamaqua,	
1087	†Swift's Pure Early Potato and Vege-	B. F. Zook, Ephrata,	5.83
1366	table Grower.	Jas Fulton Sons Co., Stewartstown,	
1379	Golden Grain Grower,	J. P. Shugart, New Freedom,	6.70
1630		Kemmerer Hdw. Co., Lehighton,	
1495	†Swift's Pure Onion, Potato and Tobacco,	H. B. Lewis, Mansfield,	7.58
1729		Jas. McCullough, Kittanning,	
1061	Swift's Pure Super Phosphate,	W. J. Kennedy Hdw. Co., Mars,	5.63
1381	†Swift's Pure Diamond A Fertilizer,	M. P. Kocher, Wrightsville,	6.53
1531		A. M. Moyer, Trevose,	
737		P. J. Oslerling & Son, Butler,	
142	†Swift's Pure Potato, Celery and Onion	Cook & Co., Dillsburg,	5.93
1096	Grower.	I. H. Reitz, Millway,	
814		W. P. Rouse & Son, North East,	
326	†Swift's Pure Grain Fertilizer,	P. J. Osterling & Son, Butler,	7.85
1062		W. J. Kennedy Hdw. Co., Mars,	
325		P. J. Osterling & Son, Butler,	
143	†Swift's Pure Truck Grower,	Cook & Co., Dillsburg,	7.00
1097		J. H. Reitz, Millway,	
1496		H. B. Lewis, Mansfield,	
144	†Swift's Pure Red Steer Fertilizer,	Cook & Co., Dillsburg,	6.03
1973		Graham Watts, Honesdale,	
	J. M. TEMPLIN, HONEY BROOK, PA.		
64	No. 4 Atlas Brand Fertilizer,	Billed to Wm. Delp, Wernersville,	11.20
63	No. 8 High Grade Potash Manure,	Billed to Wm. Delp, Wernersville,	9.40
	I. P. THOMAS & SONS CO., PHILADELPHIA, PA.		
1360	†Normal Phosphate,	Morrow & Buxton, Valencia,	9.03
1348		T. H. Knisely, Red Lion,	
330		Philip Noll, Millersburg,	
106	†Potato Fertilizer,	B. M. Stoltzfus, Elverson,	8.88
795		Jno. T. Grubb, Mifflinburg,	
104	†Thomas' Scientific Tobacco Grower,	B. M. Stoltzfus, Elverson,	7.85
868		Monroe A. Weitz, Kleinfeltersville,	
447		H. C. Stahl, Martins Creek,	
279	†Special Potato Manure,	Ed. Shuey, Lickdale,	7.33
651		Nelson Wilkinson, Paxinos,	
53	Trucker's High Grade Guano,	M. J. Dillon, Jarrettown,	8.28
647		Frances Kerstetter, Sunbury,	
261	†Victor Potash Manure,	John W. King, York Springs,	8.73
676		Wysox Coal and Hay Co., Wysox,	
1347		T. H. Knisely, Red Lion,	
1269	†Thomas' Wheat and Corn Fertilizer,	E. S. Risser, Palmyra,	12.03
1529		Theo. M. Griffith & Son, Downingtown.	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.36	8.00	1.47	9.83	.....	4.00	.....	4.00	4.00	.88	.82	21.85	24.00	177
8.26	8.60	2.17	10.43	.....	2.52	.....	2.52	2.00	1.62	1.64	23.76	24.00	178
8.14	8.00	1.03	9.17	.....	5.43	.....	5.43	4.00	1.60	1.64	26.07	27.00	15
9.69	8.00	1.13	10.82	.....	2.52	.....	2.52	2.00	.98	.82	21.94	23.00 23.50	14 17
8.67	8.00	.87	9.54	9.00	9.16	.....	*9.16	10.00	1.78	1.65	31.23	..... 26.00	526 1305
8.62	8.00	1.66	10.28	9.00	2.46	.....	2.46	2.00	1.62	1.65	23.80	....	527
7.95	8.00	.44	*8.39	9.00	4.24	.....	4.24	4.00	*.60	.85	19.80	17.00	2235
7.07	7.00	1.74	8.81	9.00	3.03	.....	3.03	3.00	1.32	1.50	21.46	25.00	2120
*7.78	8.00	.83	*8.61	9.00	7.98	.....	7.98	7.00	3.32	3.29	35.95	32.00	1249
*7.55	8.00	1.36	8.91	9.00	4.00	.....	4.00	4.00	1.58	1.65	24.18	21.00 25.50 21.37	1380 738 1568
6.26	6.00	.83	7.09	7.00	8.80	1.31	10.11	10.00	3.10	3.29	35.94	32.00 32.00	1250 1087 1366
8.39	8.00	.51	8.90	9.00	5.77	.....	5.77	5.00	1.53	1.65	26.14	22.00	1379
8.17	7.00	1.22	9.39	8.00	7.45	.....	7.45	7.00	1.64	1.65	28.46	26.00 27.46 28.50	1630 1495 1729
7.91	8.00	1.63	9.54	9.00	2.08	.....	2.08	2.00	1.60	1.65	22.70	24.00	1061
8.02	8.00	.83	8.85	9.00	3.54	.....	3.54	3.00	2.38	2.47	27.54	23.00 23.00	1381 1531
5.10	5.00	.57	5.67	5.50	9.88	.....	9.88	10.00	.78	.82	23.62	27.00 21.80 23.00	737 143 1096
8.39	8.00	1.15	9.54	8.50	2.17	.....	2.17	2.00	.91	.82	19.82	20.00 20.15 23.00	814 326 1062
7.88	8.00	1.28	9.16	8.50	4.23	.....	4.23	4.00	.84	.82	21.24	23.00 19.00 22.00	325 145 1097
8.22	8.00	1.06	9.28	9.00	2.29	.....	2.29	2.00	1.61	1.65	22.96	23.75 20.43 23.50	1496 144 1978
10.72	10.00	1.66	12.38	11.00	.53	3.72	4.25	4.00	1.86	1.65	29.83	.....	64
11.11	11.00	1.17	12.28	12.00	2.26	5.55	7.81	8.00	.82	.82	29.26	.....	63
8.78	8.50	1.10	9.88	9.00	2.69	.....	2.69	1.50	1.21	1.00	22.14	23.50 18.00	1060 1348
9.37	9.00	1.02	10.39	10.00	6.31	.....	6.31	6.00	*1.16	1.64	26.14	25.00 28.00 24.00	330 106 795
8.65	8.00	1.10	9.75	9.00	1.33	4.88	6.21	6.00	2.36	2.46	31.95	30.00 31.75	104 868
7.79	7.00	.47	8.26	8.00	10.00	1.18	11.18	10.00	1.83	1.64	32.72	28.00 27.50	447 279 651
7.50	7.00	.60	8.10	8.00	4.20	4.07	8.27	7.00	3.24	3.29	36.56	33.00	53
7.98	8.00	1.01	8.99	9.00	5.45	.....	5.45	5.00	.95	.82	22.93	21.50 20.00 21.00	647 261 676
9.38	9.00	1.06	10.44	10.00	3.92	.....	3.92	3.00	.86	.82	22.35	19.00 19.00 22.00	1347 1269 1520

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	JAMES THOMAS, WILLIAMSPORT, PA.		
1410	†Thomas' Klondike Brand Phosphate,...	Keystone Hdw. Co., Reynoldsville,..	9.28
1474		Thos. Green, Canton, ...	
1388	†Thomas' Potato and Truck Manure,....	F. E. Shoemaker, Granville Summit,	7.78
1411		Keystone Hdw. Co., Reynoldsville,.	
1480	Thomas' Standard Brand Phosphate,.....	Thos. Green, Canton, ...	12.53
	TRENTON BONE FERTILIZER CO., TRENTON, N. J.		
429	Trenton Corn Mixture, ...	L. A. Howells, Morrisville, ...	4.55
427	Trenton High Grade Potato Fertilizer,.....	L. A. Howells, Morrisville, ...	4.53
426	Farmer's High Grade Potato Fertilizer,...	L. A. Howells, Morrisville, ...	4.28
428	Trenton Keystone Potato Manure, ...	L. A. Howells, Morrisville, ...	5.40
1010	Trenton Tomato and Truck Fertilizer, ...	Hobersack Bros., Ivyland, ...	8.18
430	Trenton Potato Manure, ...	L. A. Howells, Morrisville, ...	7.78
	JACOB TRINLEY & SONS, LINFIELD, PA.		
1935	Ravene Phosphate for All Crops, ...	Isaac A. Hartman, Anselmia, ...	8.84
	F. W. TUNNELL & CO., INC., PHILADELPHIA, PA.		
1006	†Ammoniated Phosphate and Potash,....	R. B. Jackson, Cochranville, ...	7.95
2061		H. C. Breckbill, Strasburg, ...	
1547	Empire Potato Manure, ...	F. W. Tunnell & Co., Phila., ...	9.15
434	†No. 1 Special High Grade Potato Manure	Ed. Brinton & Sons, West Chester,	7.83
516		Wm. Gehman, Macungie, ...	
1925	Royal Fish Guano,.	H. A. Mendenhall, Toughkeneman,.	7.38
1524	7% Guano, ...	J. B. Sattherwaite, Woodburne, ...	5.25
1523	Special High Grade Potato Manure,.....	J. B. Sattherwaite, Woodburne, ...	6.63
1995	Sweet and White Potato Manure, ...	R. B. Jackson, Cochranville, ...	6.73
1003	Trucker's High Grade Fish Guano,.....	R. B. Jackson, Cochranville, ...	9.03
	TUSCORORA FERTILIZER CO., BALTIMORE, MD.		
253	†Fruit and Potato, ...	I. A. Eschbach, Milton, ...	8.53
314		R. C. Garber, Washington, ...	
252	York State Special, ...	I. A. Esehbach, Milton, ...	6.25
	J. E. TYGERT & CO., PHILADELPHIA, PA., BY THE A. A. C. CO., NEW YORK.		
1954	Ammoniated Super Phosphate, ...	M. C. Michener, Media, ...	7.95
1602	Early Truck Guano, ...	Geo. S. Miller, Mifflinville, ...	8.15
1953	Gold Edge Potato Guano, ...	M. C. Michener, Media, ...	6.03
1791	Golden Harvest Phosphate, ...	Mandon Sechler, Orwigsburg, ...	8.65
1795	Potato Fertilizer, ...	Mandon Sechler, Orwigsburg, ...	3.65
1955	Potato Special, ...	M. C. Michener, Media, ...	5.78
1584	Ten Per Cent. Grain Grower, ...	Newhause Bros., Bird-in-Hand,.....	5.85
1180	Victor Crop Grower, ...	J. H. Patterson, Columbia Cross Roads,	8.18
	UNION CHEMICAL WORKS, INC., NORTH WALES, PA.		
40	Ideal Potato Manure (Planting Brand),..	S. E. Schrack, Honey Brook, ...	10.87
1585	Ideal Potato Manure (Top Dressing Brand)	Newhauser Bros., Bird-in-Hand, ..	6.83
613	Potato and Celery Special, ...	Jonathon Swope, Myerstown, ...	7.30
1549	Super Phosphate and Potash No. 2.	Harry K. Mohr, Quakertown, ...	9.80
	UNITED FERTILIZER CO., CHICAGO, ILL.		
24	Evergreen Braud Flower Lawn Fertilizer,..	McClelland Co., Inc., Pittsburgh, ..	4.74
	UNITED STATES FERTILIZER CO., BALTIMORE MD.		
2125		Wm. Eves, Jerseytown, ...	
73	†Farm Bell Animal Ammoniated, ...	L. A. Geiger, Joanna, ...	7.53
1434		I. G. Ernest, Somerset, ...	
512		A. J. Tidler, Sec. Grange 1248, Rock,	
171	†Farm Bell Fruit and Potato Guano, ...	Leslie Hunt, Meadville, ...	7.38
1432		I. G. Emert, Somerset, ...	
277		Biglerville Warehouse Co., Biglerville.	
62	†Farm Bell Pennant Winner, ...	L. A. Geiger, Joanna, ...	8.68
1127		Wm. Eves, Jerseytowu, ...	
964	Farm Bell Potato and Tobacco Guano,....	Joshua Shoemaker, Walnutport, ...	6.03

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.97	9.00	.45	*9.42	10.00	3.22	.....	3.22	3.00	1.00	.82	21.57	24.00	1410
												22.00	1479
8.46	8.00	.48	8.94	9.00	5.78	.....	5.78	5.00	1.29	1.65	25.14	28.00	188
												33.00	1411
*7.73	8.00	.44	*8.17	9.00	1.36	.....	1.36	1.00	.87	.82	17.76	19.00	1480
7.21	7.00	2.2.	9.45	.....	3.22	.....	3.22	3.00	1.63	1.65	23.61	28.00	429
*5.39	6.00	1.85	7.24	.....	11.14	.....	11.14	10.00	3.21	3.30	37.22	37.00	427
6.23	6.00	1.27	7.50	.....	10.31	.....	10.31	10.00	*2.85	3.30	34.88	35.00	426
8.57	8.00	1.19	9.76	.....	10.13	.18	10.31	10.00	1.69	1.65	32.01	31.00	428
8.68	8.00	1.24	9.92	.....	5.47	.....	5.47	5.00	1.58	1.65	26.73	28.00	1019
9.32	8.00	.51	9.83	.....	7.12	.....	7.12	7.00	1.64	1.65	28.95	29.00	430
8.91	9.00	1.91	10.82	10.00	3.55	.....	3.55	3.00	1.24	1.23	23.72	22.00	1935
7.64	7.00	1 21	8.85	8.00	2.13	.....	2.13	2.00	.80	.21	18.62	.....	1006
												19.00	2001
5.98	6.00	.89	6.87	7.00	10.26	2.27	12.53	10.00	*2.80	3.30	37.03	32.00	1547
*7.62	8.00	.49	*8.11	9.00	6.13	4.53	10.66	10.00	2.76	2.46	36.88	32.00	434
												31.50	516
6.99	7.00	1.62	8.61	8.00	4.79	.....	4.79	3.00	1.82	2.00	25.42	27.00	1925
6.07	6.00	1.02	7.09	7.00	8.97	.....	8.97	7.00	*4.90	5.77	42.58	42.00	1524
6.54	6.00	1.43	7.97	7.00	9.57	.....	*9.57	10.00	2.41	2.46	31.93	32.00	1523
7.26	7.00	1.78	9.04	8.00	9.47	.....	9.47	8.00	1.55	1.64	29.42	.....	1005
5.81	5.00	1.75	7.56	6.00	2.33	.....	2.33	1.75	4.06	4.12	32.02	32.00	1003
*7.74	8.00	.88	8.62	8.50	10.08	.....	10.08	10.00	1.60	1.65	30.32	25.00	253
												32.00	314
7.82	8.00	1.41	9.23	8.50	4.64	.....	4.64	4.00	*.71	.82	21.01	16.50	252
8.15	8.00	1.59	9.74	9.00	2.35	.....	2.35	1.50	1.17	1.23	21.13	24.00	1954
6.55	6.00	1.28	7.83	7.00	3.25	.....	3.25	2.00	3.30	3.29	30.07	28.00	1602
*6.77	7.00	1.63	8.40	8.00	5.43	.....	5.43	5.00	*1.42	1.65	24.02	28.00	1953
8.81	8.00	1.24	10.05	9.00	2.62	.....	2.62	2.00	.58	.41	16.35	18.50	1794
6.58	6.00	.89	7.47	7.00	5.49	.....	5.49	5.00	1.01	.82	21.69	24.00	1795
7.15	7.00	1.47	8.62	8.00	10.00	.....	10.00	10.00	2.41	2.47	33.54	34.00	1955
7.94	7.00	.77	8.71	8.00	9.96	.....	9.96	10.00	1.64	1.23	30.19	29.00	1584
8.15	8.00	2.19	10.34	9.00	4.60	.....	4.60	4.00	.84	.82	22.34	22.00	1180
8.52	8.00	.47	8.99	.....	4.00	5.32	*9.32	10.00	3.11	3.30	38.24	.....	46
8.44	8.00	.55	8.99	.....	6.93	3.91	10.84	10.00	3.41	3.30	40.80	38.00	1585
7.77	7.00	.64	8.41	.....	7.20	3.44	10.64	10.00	1.58	1.65	31.60	28.00	613
*8.67	10.00	1.56	10.23	.....	4.43	.....	*4.43	5.00	.38	.....	17.59	20.00	1540
17.92	14.50	.46	18.38	.....	.80	16.93	17.73	15.00	8.74	8.00	84.96	.....	24
8.77	8.00	1.11	9.88	9.00	4.80	.62	5.42	5.00	*1.26	1.65	25.26	21.50	1125
												22.00	73
												22.50	1434
8.31	8.00	1.25	9.56	9.00	10.80	.40	11.20	10.00	1.65	1.65	32.52	.....	512
												30.00	171
												26.50	1432
												20.00	271
8.85	8.00	.85	9.70	9.00	4.72	.....	4.72	4.00	.85	82	22.51	20.00	69
												18.00	1127
7.73	7.00	1.28	9.01	8.00	9.43	1.26	10.69	10.00	2.69	2.46	36.40	29.25	964

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
2019	Farm Bell Standard Guano,	New Providence Coal Co., New Providence.	6.43
963	†Farm Bell Trucker's Favorite,	Joshua Shoemaker, Waluutport,	5.63
1239		H. P. Brown, Laureys,	
962	†Farm Bell Wheat, Oat and Corn Special,	Joshua Shoemaker, Waluutport,	12.13
1023		C. B. Tyler, Meshoppen,	
	VIRGINIA CAROLINA CHEMICAL CO., RICHMOND, VA.		
1196	V. C. C. Co.'s Fish Bone and Potash,	Geo. Kunkle, Winfield,	8.25
1891		McCalmout & Co., Bellefonte,	
631	V. C. C. Co.'s National Ammoniated Guano.	J. R. Weaver & Bro., New Oxford,	12.25
	J. C. WALKER & CO., Gap, PA.		
1572	Pride of Pequea High Grade Phosphate,	E. E. & W. J. S. Walker, Kinzers,	4.73
	W. E. WHANN CO., FOR, PHILADELPHIA, PA., BY THE A. A. C. CO., N. Y.		
1534	Whann's Chester Valley Economist,	Milton Johnson, Quakertown,	7.33
547	Whann's Chester Valley 15% Guano,	Clinton Strammers, Trexlertown,	8.15
1535		Milton Johnson, Quakertown,	
	ROBT A. WOOLDRIDGE CO., TRADING AS THE WOOLDRIDGE FERTILIZER CO., BALTIMORE, MD.		
1099	Omega,	E. O. Hacker, Lincoln,	5.28
1100	F. F. V. Flesh and Fish Vegetator,	E. O. Hacker, Lincoln,	5.78
1275	†Tiger Phosphate,	E. O. Hacker, Lincoln,	6.75
1098		S. B. Jackson, Carlisle,	
	ROBERT A. WOOLDRIDGE CO., THE, BALTIMORE, MD.		
107	†Wooldridge's Champion Giant Phosphate,	Albert L. Kramer, Mohnton,	10.90
416		F. G. Evans, Kelton,	
356	Wooldridge's Farmer's Favorite Cereal Compound.	Adam Beach, New Enterprise,	7.03
418	†Wooldridge's Feruwood Grange Mixture,	F. G. Evans, Kelton,	9.10
787		C. C. Catherman, Millmont,	
1251	Wooldridge's High Grade Ammoniated Potash Fertilizer.	Wm. A. Schaffer, Tamaqua,	6.95
332	†Wooldridge's Special Potato and Tobacco Fertilizer.	V. A. Stufft, Imler,	9.65
1276		S. B. Jackson, Carlisle,	
786	†Wooldridge's Trumpet Brand Phosphate,	C. C. Catherman, Millmont,	9.75
417		F. G. Evans, Kelton,	
1110		Henry D. Bard, Reinholds,	
	YORK CHEMICAL WORKS, YORK, PA.		
696	†Dempwolf's Crop Grower,	A. P. Lippy, Littlestown,	5.10
1679		C. F. Fendrick, Mercersburg,	
694	†Dempwolf's Early Trucker,	Chas. Geiger, Scarlet Mills,	7.60
1254		J. F. Kistler, Tamaqua,	
2176	Dempwolf's Special Tobacco,	Henry Deiter, Strasburg,	4.13
842	Dempwolf's Harvest King,	Hershey Store Co., Hershey,	7.65
337	†Dempwolf's Harvest Queen,	A. C. Rupper, Halifax,	9.65
140		A. C. Hartman, Dillsburg,	
391		J. B. Hershbergh, Everett,	
339	†Dempwolf's Standard Potash,	S. T. Lebo, Halifax,	6.65
139		A. C. Hartman, Dillsburg,	
360		Andrew Coughenour, Harnedsville,	
359	†Dempwolf's Potato Manure,	Andrew Coughenour, Harnedsville,	6.23
196		Maurice Leouard, Oakland Mills,	
1674	†Dempwolf's Potato and Truck Special,	P. S. Lehman, Chambersburg,	7.13
605		Chas. A. Geiger, Scarlet Mills,	
845	†Golden Sheaf,	Hershey Store Co., Hershey,	5.68
695		A. P. Lippy, Littlestown,	
1218	One-Eight-Four,	Steininger Bros., Middleburg,	6.30
694		A. P. Lippy, Littlestown,	
	HENRY S. ZOOK, ELVERSON, PA.		
109	No. 7 Pride of Chester Wheat, Corn and Potato Phosphate.	Jacob Stoltzfus, Elverson,	7.23

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.			Total.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.68	8.00	1.02	9.70	9.00	2.76	.....	2.76	2.00	1.65	1.65	24.34	19.00	2019
7.42	6.00	.83	8.25	7.00	9.63	.....	9.63	8.00	3.28	3.28	37.25	29.58 30.80	963 1239
8.48	8.00	.37	8.85	9.00	6.70	.....	6.70	6.00	.91	.82	24.19	20.00 26.00 21.50	962 172 1028
8.60	8.00	2.70	11.30	9.00	3.32	.....	3.32	3.00	1.60	1.65	25.14	20.00 24.00	1196 1891
8.60	8.00	2.55	11.15	9.00	4.29	.....	4.29	4.00	.87	.82	22.66	18.00	631
7.72	7.00	1.43	9.15	.....	2.53	5.66	8.19	8.00	2.38	2.47	33.62	29.00	1572
7.92	8.00	1.77	9.69	9.00	2.66	.....	2.66	2.00	.76	.41	19.47	18.50	1534
9.38	7.00	.84	10.22	8.00	8.34	.....	*8.34	15.00	.85	.82	26.74	27.75 33.00	547 1535
8.06	8.00	.93	8.99	8.50	10.61	.....	10.61	10.00	.87	.82	27.75	25.00	1099
7.14	7.00	2.42	9.56	7.50	7.10	.....	7.10	7.00	2.46	2.47	31.27	28.00	1100
8.03	8.00	1.28	9.31	8.50	4.63	.....	4.63	4.50	1.06	1.03	22.71	22.00 22.50	1098 1275
9.32	9.00	1.38	10.70	10.00	2.21	.....	2.21	2.00	.99	.82	21.37	20.00 21.00	107 416
7.19	7.00	.98	8.17	8.00	2.50	.....	2.50	2.00	.58	.41	17.51	16.00	393
8.58	8.00	1.24	9.82	9.00	7.77	.....	*7.77	8.00	1.61	1.65	28.95	26.00 26.00	418 787
8.05	8.00	.95	9.00	9.00	8.93	.....	*8.93	10.00	1.75	1.65	30.18	27.00	1251
9.41	9.00	1.22	10.63	10.00	5.05	.....	5.05	5.00	*1.45	1.65	26.37	28.00 26.00	382 1276
8.58	8.00	1.54	10.12	9.00	4.70	.....	4.70	4.00	1.25	1.23	24.37	21.90 24.00 18.75	786 417 1110
8.05	8.00	.93	8.98	8.50	2.02	.....	2.02	1.00	1.09	.82	20.12	18.00 15.50	696 1679
*5.79	6.00	2.84	8.63	6.50	8.00	.28	8.28	7.00	3.94	4.11	38.24	..... 34.00	604 1254
*4.78	5.00	.67	5.45	5.50	1.20	10.23	11.43	10.00	3.61	3.29	40.16	40.00	2176
8.85	8.00	.58	9.43	9.00	5.73	.....	5.73	5.00	1.61	1.65	26.88	22.00	842
8.31	8.00	1.02	9.33	8.50	2.62	.....	2.62	2.00	.85	.82	19.90	17.50 19.00 22.00	337 140 391
8.35	8.00	1.34	9.69	8.50	4.62	.....	4.62	4.00	.93	.82	22.59	..... 20.00 22.00	339 139 360
6.21	6.00	1.25	7.46	6.50	7.90	.....	7.90	7.00	.82	.82	23.04	26.00 21.00 22.00	359 196 1674
8.11	8.00	1.57	9.68	9.00	1.33	6.74	8.07	7.00	2.53	2.46	34.93	..... 33.00	605 845
8.21	8.00	1.06	9.27	8.50	2.40	.....	2.40	2.00	.66	.29	18.68	18.00 15.00	695 1218
8.62	8.00	1.25	9.87	8.50	4.80	.....	4.80	4.00	.77	.82	22.09	22.00	694
9.14	8.00	.51	9.65	9.00	7.03	.....	7.03	6.00	1.86	1.65	29.60	26.00	109

*Constituent falls below guaranty.

ROCK AND POTASH

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	AMERICAN AGRICULTURAL CHEMICAL CO., THE, NEW YORK.		
593	†Gem Alkaline Phosphate,	Morris Reese, West Leesport,	7.48
260		O. F. Arnold, Dillsburg,	
926		H. F. Gump & Son, Everett,	
945	†High Grade Phosphate, and Potash,	Saylor & Way, Somerset,	8.23
1832		B. F. Horting, Newport,	
1215		W. B. Winey, Middleburg,	
594	†High Grade Potash Mixture,	Morris Reeser, West Leesport,	6.68
1830		B. F. Horting, Newport,	
1064	Bradley's Alkaline Phosphate and Potash,	S. K. Smith & Son, New Bethlehem,	9.95
1463	†Bradley's Big Crop,	G. R. Andrews, Enon Valley,	8.45
455		A. W. Sandt, Martins Creek,	
1474		W. J. Moyer, Fredonia,	
665	Bradley's Circle Phosphate,	R. C. King, Ulster,	10.00
681	†Bradley's Magic Phosphate,	H. A. Kramer & Son, Monroeton,	11.23
1473		W. J. Moyer, Fredonia,	
47	Cauton Chem. Soluble Alkaline Phosphate,	A. H. Keely & Son, Schwenksville,	11.00
1466	†Crocker's Dissolved Phosphate and Potash.	L. P. Aruer, Orangeville, Ohio,	8.70
1055		Bentleyville Hdw. Co., Bentleyville,	
1746		W. R. Stoughton Son, Petrolia,	
812	Crocker's Globe Phosphate,	W. H. Rouser & Son, North East,	9.25
1726	Crocker's Paragon Phosphate,	J. L. Culp, Indiana,	6.95
951	†Crocker's Perfect Crop,	Peter Haughenbuch, Nazareth,	7.80
808		L. F. Haag, Girard,	
1053		Bentleyville Hdw. Co., Bentleyville,	
1039	East India Ideal Mixture,	B. J. Dougherty, Meshoppen,	11.23
2	Maryland Alkaline Phosphate,	Hedge Farm, Marion,	9.85
467	†North Western Choice Crop,	Jno. Kunkle, Bath,	6.90
1259		Amos B. Sax, Wyoming,	
995	North Western Electric Phosphate,	L. E. Wilcox, Danboro,	10.05
1123	North Western High Grade Alkaline Phosphate.	A. M. Schultz, Eyers Grove,	7.63
722	North Western Horse Shoe Brand,	L. R. Over, Curryville,	9.68
826	Michigan Carbon Works Wheat and Grass Fertilizer.	Davis & Hyde, Spartansburg,	7.38
2228	Milsom's Eclipse Phosphate,	L. M. Roberts, Roulette,	9.60
596	†Milsom's Star Crop,	Morris Reeser, West Leesport,	7.65
914		Sol. F. Diehl, Lutzville,	
1282	Moro Phillips Alkaline Phosphate,	Nickles & Stewart, Shippensburg,	8.28
468	Read's Boss Crop,	Irwin Fisher, Nazareth,	7.48
469	Read's Farmer's Reliable,	Irwin Fisher, Nazareth,	8.53
22	Reese's High Grade Potash Mixture,	A. H. Fullerton, Ediuburg,	9.88
267	†Susquehanna High Grade Phosphate and Potash.	Z. J. Peters, Gernsey,	8.08
240		J. M. Getz Co., Lock Haven,	
1841		G. E. Beaver, Millerstown,	
87	Wheeler's All Crop Grower,	Wm. J. Johuson, Sinking Spring,	9.25
489	†Williams & Clark Banner Crop,	C. E. Drake, Athens,	6.58
643		J. K. Hetrick, Snubury,	
652	†Williams & Clark Triumph Phosphate,	Jas. H. Smith, Fishers Ferry,	8.73
1981		Stewart Weaver, Easton,	
1195	†Zell's Eleetric Phosphate,	B. F. Hummel, Shamokin,	9 08
202		W. V. Shirk, Oakland Mills,	
1829		B. F. Horting, Newport,	
	AMERICAN FERTILIZING CO., BALTIMORE, MD.		
1691	American Special Potash Mixture,	J. W. Hartman, Kauffmau,	7.33
687	†American Speeial Super Phosphate,	A. D. Brown, East Berlin,	4.48
1525		N. B. Keim Sons, Langhorne,	
1526	†Dissolved Phosphate and Potash,	N. B. Keim Sons, Langhorne,	9.30
183		J. H. Neidigh, State College,	
1560		Jones Eavenson, Christiana,	
	ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.		
585	†Banner Brand,	Chas. Yaeckle, Patton,	8.85
481		Windham Grange, Nichols, N. Y.,	
769		Henry S. Brown, Cocolamus,	

†Composite sample.

FERTILIZERS.

Acid and Potash.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.				
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.			
6.77	6.00	.55	7.32	7.00	3.22	.....	3.22	3.00	12.73	15.00	593
										13.50	260
12.48	12.00	.59	13.07	13.00	5.67	.....	5.67	5.00	19.36	15.00	926
										19.50	945
										15.75	1832
10.56	10.00	.51	11.07	11.00	10.02	.....	10.02	10.00	22.38	21.00	1215
										23.00	594
										18.50	1830
9.98	10.00	2.07	12.05	11.00	1.88	.....	1.88	2.00	14.29	18.00	1064
										19.00	1463
10.07	8.00	.56	10.63	9.00	4.71	.....	*4.71	5.00	16.68	16.00	455
										20.00	1474
10.40	10.00	1.27	11.67	11.00	7.56	.....	*7.56	8.00	20.05	22.00	665
11.97	12.00	.69	*12.66	13.00	4.91	.....	4.91	5.00	18.26	20.00	681
										21.00	1473
12.18	12.00	.79	12.97	13.00	3.86	.....	3.86	3.00	17.38	18.00	47
10.40	10.00	1.30	11.70	11.00	2.64	.....	2.64	2.00	15 01	18.00	1466
										18.00	1055
										20.00	1746
*9.58	10.00	.55	*10.13	11.00	8.04	.....	8.04	8.00	19.72	21.00	812
12.88	12.00	.78	13.66	13.00	5.48	.....	5.48	5.00	19.58	20.00	1726
										.....	951
8.26	8.00	.83	9.09	9.00	4.61	.....	*4.61	5.00	15.34	20.00	808
										22.00	1053
10.50	10.00	1.27	11.77	11.00	2.19	.....	2.19	2.00	14.66	18.00	1030
12.76	12.00	.64	13.40	13.00	2.99	.....	2.99	3.00	16.88	.....	2
8.42	8.00	.79	9.21	9.00	5.50	.....	5.50	5.00	16.35	15.00	467
										16.00	1259
10.31	10.00	.86	11.17	11.00	2.01	.....	2.01	2.00	14.17	16.00	995
10.58	10.00	.84	11.42	11.00	8.14	.....	8.14	8.00	20.64	.....	1123
12.31	12.00	.67	12.98	13.00	5.06	.....	5.06	5.00	18.68	16.50	722
8.42	8.00	.57	8.99	9.00	5.21	.....	5.21	5.00	15.99	18.00	826
10.25	10.00	.26	*10.51	11.00	8.03	.....	8.03	8.00	20.08	.....	2228
8.85	8.00	.69	9.54	9.00	4.95	.....	4.95	5.00	16 08	18.00	596
										14.00	914
10.14	10.00	.59	*10.73	11.00	2.23	.....	2.23	2.00	14.22	14.00	1282
9.56	8.00	.76	10.32	9.00	4.81	.....	4.81	5.00	16.45	14.00	468
12.39	12.00	.82	13.21	13.00	4.69	.....	*4.69	5.00	18.42	16.00	469
12.20	12.00	.70	12.90	13.00	5.22	.....	5.22	5.00	18.74	19.00	22
										19.00	267
11.92	12.00	1.12	13.04	13.00	5.26	.....	5.26	5.00	18.75	20.00	240
										17.00	1841
6.54	6.00	1.09	7.63	7.00	3.14	.....	3.14	3.00	12.73	14.00	87
8.47	8.00	.89	9.36	9.00	5.31	.....	5.31	5.00	16.22	19.00	489
										16.00	643
10.14	10.00	1.17	11.31	11.00	2.45	.....	2.45	2.00	14.62	15.00	652
										20.00	1981
										.....	1195
10.58	10.00	.56	11.14	11.00	2.52	.....	2.52	2.00	14.79	.....	202
										12.25	1829
9.60	8.00	1.49	11.09	9.00	4.17	.....	4.17	4.00	16.09	14.00	1691
5.94	6.00	1.56	7.50	7.00	3.32	.....	3.32	3.00	12.62	12.00	687
										14.00	1525
										15.10	1526
10.50	10.00	1 68	12.18	11.00	2.12	.....	2.12	2.00	14.72	13.50	183
										13.00	1560
10.02	10.00	.54	10.56	10.50	8.35	.....	8.35	8.00	20.32	18.00	585
										16.00	481
										18.00	769

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
445	†Phosphate and Potash No. 1,	Reese H. White, Honeybrook,	9.38
362		P. J. Cower & Son, Meyersdale,	
564		Seligman & Co., Tamaqua,	
771	†Potash Mixture,	Henry S. Brown, Cocolamus,	5.75
923		Jno. Hershberger, Everett,	
397	†Sure Crop,	A. L. Iches, Osterburg,	8.95
356		Confluence Lumber Yard, Confluence,	
734		E. H. Buhle, Williamsburg,	
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.		
624	Honest, 8 and 3,	I. N. Leightner, Gettysburg,	7.33
230	Honest, 10 and 5,	H. E. Van Orner, Thompsontown,	11.33
	BAUGH & SONS CO., PHILADELPHIA, PA.		
457	†Baugh's Sol. Alkaline Super Phosphate,	John F. Stier, Johnsonville,	10.55
234		E. H. Hays, Clintondale,	
582		H. L. Stultz & Bro., Altoona,	
265	†Baugh's 10 and 4 Phosphate and Potash Mixture.	Grover C. Myers, Idaville,	9.85
233		E. H. Hays, Clintondale,	
340		Peter E. Enders, Halifax,	
	BERGER BROTHERS, EASTON, PA.		
1625	Peerless Phosphate,	John Osterstock, Easton,	6.63
	BOWKER'S FERTILIZER CO., NEW YORK CITY.		
1457	†Bowker's Empire State Phosphate and Potash.	Kernochen & Co., Titusville,	7.48
1404		B. F. Fink, Huntingdon,	
1939		Harry L. Moses, Chester Springs,	
1078	†Bowker's Golden Harvest Fertilizer,	A. N. Levan & Son, Kutztown,	9.48
1766	†Bowker's S. & P. Fertilizer,	H. B. Harned, Wyoming,	9.78
848		Jno. H. Hibshman, Myerstown,	
1940	†Bowker's Super Phosphate with Potash,	Harry L. Moses, Chester Springs,	4.05
1972		Murry & Co., Honesdale,	
729		H. L. Stultz, Hollidaysburg,	
1802		Geo. Manners, Pitman,	
	CENTRAL CHEMICAL CO., HAGERSTOWN, MD.		
1871	Big Crop Compound,	L. H. Leitre & Bro., Greencastle,	6.35
1283	C. C. C. Commonwealth Phosphate and Potash.	Nickles & Stewart, Shippensburg,	9.98
3	C. C. C. Eastern Star,	Michael Ickes, Scotland,	6.45
1683	C. C. C. Great Southern,	J. A. Witherspoon, Mercersburg,	7.65
775	†C. C. C. Pioneer Majestic,	J. Laudonslager, Thompsontown,	8.85
334		J. H. Weiter, Halifax,	
1133		W. F. Slagle, Bloomsburg,	
776	†C. C. C. Potash Special,	J. Laudonslager, Thompsontown,	7.58
1855		A. H. Ulsh, Millerstown,	
881	C. C. C. Potato Grower,	M. G. Adams, Paxinos,	8.00
	CHESAPEAKE CHEMICAL CO., THE, BALTIMORE, MD.		
720	C. C. Co's Celebrated Mixture,	Wm. Biller, Patton,	10.15
719	C. C. Co's Reliable Phosphate,	Wm. Biller, Patton,	11.98
	COLUMBIA GUANO CO., BALTIMORE, MD.		
1501	†Columbia Double Ten Potash Mixture,	Jno. Kelsa, Mansfield,	9.30
487		Henry Bressler, Athens,	
1655		Wm. H. Briton, Falls Creek,	
2072	Columbia Premium Phosphate and Potash,	A. C. Dougherty, Grove City,	7.55
	JOSIAH COPE & CO., BALTIMORE, MD.		
1554	†Jos. Cope & Co. High Grade Phosphate and Potash.	Jones Eavenson, Christiana,	8.70
1934		Geo K. Watson, Embreeville,	
1556	†Jos. Cope & Co., Soluble Phosphate and Potash.	Jones Eavenson, Christiana,	8.80
909		H. W. Beaver, Schellsburg,	
1928	†Jos. Cope & Co. Universal Mixture for All Crops.	F. E. Bailey, Northbrook,	8.38
919		Frances Baker, Everett,	
1555		Jones Eavenson, Christiana,	

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.				
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.			
10.15	10.00	.77	10.92	10.50	2.21	.....	2.21	2.00	14.23	14.00	445
										17.00	362
										18.00	564
6.05	6.00	.56	6.61	6.50	3.18	.....	3.18	3.00	12.22	13.00	771
										15.00	923
										.....	397
8.21	8.00	.32	8.53	8.50	5.47	.....	5.47	5.00	15.99	17.00	356
										15.00	734
8.38	8.00	.33	*8.71	9.00	3.77	.....	3.77	3.00	14.37	15.00	624
11.20	10.00	1.47	12.67	11.00	5.32	.....	5.32	5.00	18.40	15.75	230
										.....	457
10.67	10.00	.55	11.22	.....	2.46	.....	2.46	2.00	14.77	15.50	234
										17.00	582
										14.50	265
10.65	10.00	1.08	11.73	.....	4.72	.....	4.72	4.00	17.26	17.50	233
										16.00	340
8.39	8.00	1.15	9.54	9.00	5.12	.....	5.12	5.00	16.08	16.00	1625
7.99	8.00	.66	*8.65	9.00	3.41	.....	3.41	3.00	13.84	20.00	1457
										18.00	1404
12.36	12.00	.91	13.27	13.00	4.87	.....	4.87	5.00	18.56	20.00	1939
										20.00	1078
11.30	10.00	.79	12.09	11.00	1.39	.....	1.39	1.00	14.25	.....	1766
										17.00	848
										18.00	1940
11.25	10.00	77	12 02	11.00	2.35	.....	2.35	2.00	15.18	20.00	1972
										16.00	729
										15.20	1802
8.45	8.00	.28	8.73	.....	4.87	.....	4.87	5.00	15.56	14.00	1871
*9.70	10.00	.39	10.09	.....	2.42	.....	2.42	2.00	13.98	14.00	1283
11.43	10.00	.52	11.95	11.00	5.09	.....	5.09	4 00	18.03	14.00	3
9.87	10.00	.21	10.08	.....	5.53	.....	5.53	5.00	17.18	15.50	1683
										15.50	775
8.46	8.00	.12	8.58	.....	5.38	.....	5.38	5.00	16.03	14.00	334
										18.00	1138
12.79	12.00	.28	13.07	.....	5.64	.....	5.64	5.00	19.47	19.00	776
										18.00	1855
10.51	10.00	.13	10.64	.....	10.70	.....	10.70	10.00	22.94	22.00	881
11.05	10.00	1.10	12.15	11.00	2.96	.....	2.96	2.00	15.76	14.00	720
10.57	10.00	2.33	12.90	11.00	4.35	.....	4.35	4.00	17.29	15.00	719
10.38	10.00	1 17	11.55	10.50	9.60	.....	*9.60	10.00	22.10	20.00	1501
										22.50	487
										21.70	1655
10.28	10.00	1.08	11.35	10.50	8.31	.....	8.31	8.00	20.65	20.00	2072
*9.54	10.00	.84	*10.38	11.00	5.12	.....	5.12	5.00	16.80	16.00	1554
										17.00	1934
										14.00	1556
10.37	10.00	.62	10.99	11.00	2.31	.....	2.31	2.00	14.46	14.10	909
										14.00	1928
9.05	8.00	.54	9.59	9.00	7.77	.....	*7.77	10.00	19.03	20.00	919
										19.00	1555

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	JAS. G. DOWNWARD CO., THE, COATESVILLE, PA.		
2074	Soluble Phosphate and Potash, ...	Abraham Reese, New Providence, ..	6.15
	EUREKA CHEMICAL CO., BALTIMORE, MD.		
1842	†Eureka Alkaline No. 2, ...	E. G. Sheaffer, Oriental, ...	8.95
865		Geo. Stoher, Kleinfelterville, ...	
2016		New Prov. Coal Co., New Providence	
	FARMER'S FERTILIZER WORKS, THE, ELIZABETHTOWN, PA.		
332	Sure Crop, ...	Chas. G. Shetron, Millersburg, ...	7.58
	W. S. FARMER & CO., BALTIMORE, MD.		
1363	W. S. Farmer & Co's Corn, Oats and Buckwheat.	D. J. Trout, Stewartstown, ...	6.60
	GRIFFITH & BOYD CO., BALTIMORE, MD.		
764	Monarch Brand, ...	B. F. Gayman, Thompsontown, ...	7.08
1373	†Special Grain Grower, ...	H. W. Rehmeyer, Turnpike, ...	9.23
615		H. J. Van Dyke, Gettysburg, ...	
1838		Kipp & Moore, Millerstown, ...	
887	†X. X. Potash Manure, ...	E. D. Tewksbury, Catawissa, ...	10.48
404		Passmore & Co., Nottingham, ...	
763		B. F. Gayman, Thompsontown, ...	
	W. S. HASTINGS & SON, ATGLEN, PA.		
1512	Star Brand, ...	W. S. Hastings & Son, Atglen, ...	8.30
	S. M. HESS & BRO., INC., PHILADLPHIA, PA.		
1070	†S. M. Hess & Bro's Emperor Phosphate,	Sam D. Snyder, Myerstown, ...	9.30
1639		Milton A. Buck, Kunkletown, ...	
717	†S. M. Hess & Bro's Farmer's Grain and	J. H. and H. J. Hoover, Patton, ...	7.53
792	Clover Grower.	J. R. Iddenings, Mifflinburg, ...	
653	†S. M. Hess & Bro's Soluble Phosphate	Jacob Driebellis, Trevorton, ...	9.03
378	and Potash.	A. F. Hengst, Osterburg, ...	
718		J. H. and H. J. Hoover, Patton, ...	
377	†Standard Alkaline, ...	A. F. Hengst, Osterburg, ...	8.33
645		Reuben Herman, Sunbury, ...	
	HUBBARD FERTILIZER CO., THE, BALTIMORE, MD.		
712	Hubbard's Alkaline 10 and 8, ...	Wm. Biller, Patton, ...	11.35
1428	Hubbard's Corn and Buckwheat 6—3, ...	Peffer & Son, Punxsutawney, ...	5.63
1607	†Hubbard's Special Mixture 10—4, ...	D. C. Shuman, Bloomsburg, ...	10.60
278		Biglerville Warehouse Co., Biglerville.	
2029		H. G. Niggins, New Providence, ...	
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTZ. WORKS, BUFFALO, N. Y.		
1755	Extra Phosphate and Potash, ...	Harmony Cereal Mills, Harmony, ..	6.00
1754	†General Crop, ...	Harmony Cereal Mills, Harmony, ..	7.40
1781		C. D. Bower & Bro., Berwick, ...	
1415	Phosphate and Potash, ...	Reynoldsville Hdw. Co., Reynoldsville.	7.80
	INTERNATIONAL AGRICULTURAL CORPORATION, PENNA. FERTZ. CO., BUFFALO, N. Y.		
1416	Grass and Grain, ...	Reynoldsville Hdw. Co., Reynoldsville.	10.45
	JARECKI CHEMICAL CO., THE, SANDUSKY, OHIO.		
13	Square Brand Phosphate and Potash, ...	Eugene Burnette, Utica, ...	8.77

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.				
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.			
*7.71	9.00	.63	*8.34	10.00	4.02	.....	4.02	4.00	14.26	.....	2024
11.02	10.00	.59	11.61	10.50	2.17	.....	2.17	2.00	14.73	14.50 17.50 13.00	1842 865 2016
10.89	10.00	.37	11.26	.....	7.80	.....	*7.80	8.00	20.34	19.75	332
6.16	6.00	.27	*6.43	7.00	3.67	.....	3.67	3.00	12.68	14.00	1368
8.54	8.00	3.06	11.60	9.00	5.65	.....	5.65	5.00	17.42	16.00	764
10.14	10.00	2.65	12.79	11.00	3.04	.....	3.04	2.00	15.78	12.50 14.50 13.50	1373 615 1838
10.79	10.00	2.19	12.98	11.00	5.12	.....	5.12	5.00	18.17	17.00 17.00 17.00	887 404 763
10.72	10.00	.51	11.23	.....	5.22	.....	5.22	5.00	17.62	16.00	1512
9.94	10.00	1.50	11.44	11.00	1.46	.....	1.46	1.00	13.58	15.00	1070
10.68	10.00	.92	11.60	11.00	7.57	.....	*7.57	8.00	20.13	16.00 17.00 19.50	1639 717 792
11.03	10.00	.51	11.54	11.00	2.25	.....	2.25	2.00	14 83	21.00 25.00 12.25	653 378 718
8.27	8.00	.63	8.90	9.00	5.09	.....	5.09	5.00	15.79	16.50 17.00	377 645
10.11	10.00	1.91	12.02	11.00	7.76	.....	*7.76	8.00	20.26	18.00	712
7.66	6.00	1.96	9.62	7.00	3.34	.....	3.34	3.00	14.04	17.00	1428
10.77	10.00	1.52	12.29	11.00	4.52	.....	4.52	4.00	17.31	16.00 17.00 15.00	1607 278 2029
10.08	10.00	1.13	11.21	11.00	7.38	.....	*7.38	8.00	19.62	20.00	1755
9.52	9.00	.93	10.45	10.00	3.16	.....	3.16	3.00	14.82	16.00	1754
12.48	12.00	.75	13.23	13.00	5.02	.....	5.02	5.00	18.78	15.00 21.00	1781 1415
10.60	10.00	.62	11.22	11.00	1.92	.....	1.92	2.00	14.19	16.50	1416
*9.40	10.00	1 28	*10.68	11.00	1.85	.....	1.85	2.00	13.52	18.00	13

*Constituent falls below guaranty.

Sample number.	Manufacturer and Braud.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	LANCASTER CHEMICAL CO., LANCASTER, PA.		
774	No. 16, Phosphoric Acid and Potash Special.	Emil Ward, Thompsontown,	8.20
204	No. 13, Special Potash Manure,	C. S. Winey, McAllisterville,	8.70
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
1181	†Lister's Superior Dissolved Phosphate and Potash.	D. T. Gates, Columbia Cross Roads,	8.25
1701		John Thomas, Wellsboro,	
388	†Lister's Potash Mixture,	J. N. Wertz, Bedford,	6.88
231		Knecht Milling Co., Parvin,	
855		Isaac Plasterer, Lebanou,	
	FREDERICK LUDHAM CO., THE, BALTIMORE, MD.		
2201	Ludham's "Cecrops Fertilizers," Economy,	Wm. Hess, Quarryville,	5.98
2202	Ludham's "Cecrops Fertilizers," I. X. L. Brand.	Wm. Hess, Quarryville,	6.48
	D. B. MARTIN & CO., PHILADELPHIA, PA.		
194	Martin's No. 4 Potash and Soluble Phosphate.	T. J. Novinger, Lewistown.	11.33
	MILLER FERTILIZER CO., THE, BALTIMORE, MD.		
238	Miller's Potash Mixture,	W. L. Wolfe, Booneville,	9.95
641	Special Alkaline,	J. H. Gass, Sunbury,	8.25
	NASSAU FERTILIZER CO., NEW YORK CITY.		
383	†Grass and Grain Fertilizer,	F. B. Corle, Piara.	9.98
257		Harry Baker, Clear Spring,	
671		Chas. Usher, E. Smithfield,	
1210	†Royal Mixture,	S. J. Stewart, Selinsgrove,	7.40
155		S. B. King, York Springs,	
905		C. Mechle, Osterburg,	
	G. OBER & SONS CO., BALTIMORE, MD.		
623	†Ober's Big 4 Special Fertilizer,	D. Blocher & Co., Gettysburg,	8.03
367		Shipley Hdw. Co., Meyersdale,	
649		John Phillips, Sunbury,	
	PATAPSCO GUANO CO., BALTIMORE, MD.		
1170	Patapsco Superior Alkaline Manure,	Jas. McNamara, Cadis,	8.05
767	†Patapsco Alkaline Plant Food,	Jno. Harley, Thompsontown,	7.80
619		E. C. Thomas, Gettysburg,	
1713		James Seagers, Westfield,	
806	†Patapsco Phospho Potash,	Geo. W. Robinson, Allenwood,	6.58
633		J. N. Hersh, New Oxford,	
935		P. J. Blough's Sons, Hooversville,	
634	†Patapsco Soluble Phosphate and Potash,	Granville Merc. Co., Granville Summit.	8.45
1187		J. N. Hersh, New Oxford,	
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.		
1851	Piedmont Farmer's Potash Mixture,	A. H. Ulsh, Millerstown,	9.63
617	Piedmont Soluble Phosphate and Potash Mixture.	H. D. and J. F. Bream, Gettysburg,	4.70
256	Piedmont Special Potash Mixture,	D. F. Stitzel, York Springs,	8.10
	PIONEER FERTILIZER CO., CLEVELAND, OHIO.		
20	Pioneer 10-8 Fertilizer,	Wm. H. Roadhouse, Greenville,	6.08
	RASIN MONUMENTAL CO., BALTIMORE, MD.		
185	†Rasin's Phosphate and Potash Fertilizer,	C. B. McCormick, State College,	10.00
153		J. M. Ferrance, Dillsburg,	
1422		Peffer & Son, Punxsutawney,	
152	†Rasin's Wheat and Truck Mixture,	J. M. Ferrence, Dillsburg,	10.20
116		Chas. Yaeckle, Patton,	
302		N. W. Troup, Elizabethville,	

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.				
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.			
*8.30	10.00	2.64	10.94	11.00	8.60	.....	8.60	8.00	20.01	19.60	774
*8.40	10.00	2.08	*10.48	11.00	5.52	.....	5.52	5.00	16.82	.....	204
10.37	10.00	.48	10.85	11.00	7.82	.....	7.82	8.00	20.12	22.00	1181
										20.00	1701
8.54	8.00	.48	9.02	9.00	5.24	.....	5.24	5.00	16.08	16.00	388
										17.00	231
										17.00	855
6.58	6.00	.27	6.85	7.00	3.55	.....	3.55	3.00	12.87	.....	2201
8.32	8.00	.36	*8.68	9.00	5.41	.....	5.41	5.00	16.05	.....	2202
12.28	8.00	.27	12.55	.....	5.67	.....	5.67	5.00	19.11	17.00	194
10.92	10.00	.87	11.79	10.50	5.51	.....	5.51	5.00	18.19	18.00	238
11.10	8.00	.46	11.56	8.50	2.61	.....	*2.61	5 00	15.21	18.00	641
10.68	10.00	.60	11.28	11.00	2.43	.....	2.43	2.00	14.82	16.00	383
										13.50	257
										16.00	671
8.33	8.00	.66	8.99	9.00	5.38	.....	5.38	5.00	16.16	14.15	1210
										14.90	155
										16.00	905
9.33	8.00	.42	9.75	9.00	4.27	.....	4.27	4.00	15.61	16.00	623
										16.00	367
										16.00	649
10.50	10.00	.81	11.31	11.00	8.48	.....	8.48	8.00	20.86	19.60	1170
8.76	8.00	.60	9.36	9.00	5.18	.....	5.18	5.00	16.22	15.50	767
										16.00	619
										15.00	1713
6.57	6.00	.48	7.05	7.00	2.97	.....	2.97	3.00	12.31	18.00	806
										15.00	633
										15.00	935
10.53	10.00	.62	11.15	11.00	2.39	.....	2.39	2.00	14.66	16.50	634
										13.50	1187
10.21	10.00	.47	10.68	.....	1.98	.....	1.98	2.00	13 99	14.50	1851
*7.78	8.00	.66	8.44	.....	2.41	.....	2.41	2.00	12.70	14.50	617
10.29	10.00	.50	10.79	.....	4.77	.....	*4.77	5.00	16.84	15.50	256
9.82	10.00	.63	*10.45	11.00	6.61	.....	*6.61	8.00	18.43	22.00	20
10.90	10.00	1.72	12.62	11.00	2.39	.....	2.39	2.00	15.31	13.75	185
										12.50	153
										17.00	1422
9.81	10.00	2.08	11.89	11.00	8.04	.....	8.04	8.00	20.42	17.00	152
										18.00	116
										17.00	302

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	READING BONE FERTILIZER CO., READING, PA.		
1226	†Economy Brand,	Benj. Hoffman, McClure,	6.88
986		B. F. Shearer, Dublin,	
1482		G. J. Smith, Cleason,	
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.		
1222	†Royster's Alkaline Phosphate,	T. C. Walter, Winfield,	3.63
761		B. F. Cayman, Thompsontown,	
1721		I. W. Cihson, Indiana,	
684	†Royster's Bumper Crop Phosphate,	L. C. Blair, Rummerfield,	6.90
249		J. L. Ditzler, Milton,	
709		Humbert & King, Littlestown,	
685	†Royster's Peerless Grain and Crass Crower.	L. C. Blair, Rummerfield,	7.45
156		Wm. Howe, York Springs,	
765		B. F. Gayman, Thompsontown,	
1904	Royster's Superior Potash Mixture,	R. D. Formon, Center Hall,	4.03
	SCOTT FERTILIZER CO., THE, ELKTON, MD.		
2186	Scott's Tip Top and Potash,	S. Book & Bro., Quarryville,	10.53
	S. M. SHULER & SON, LIVERPOOL, PA., BY THE A. A. C. CO., N. Y.		
7	Shuler's Phosphate and Potash,	S. M. Shuler & Son, Liverpool,	8.70
	SMITH AGRICULTURAL CHEMICAL CO., COLUMBUS, OHIO.		
180	Ohio Farmer's Climax Phosphate,	Kirkland & Co., Girard,	10.13
16	Ohio Farmer's Soluble Phosphate and Potash.	Geo. J. Abbey, West Springfield,	8.99
	SWIFT & CO., CHICAGO, ILL.		
1472	†Swift's Pure Diamond G. Fertilizer,	G. D. McCutcheon, Fredonia,	8.25
735		P. J. Osterling & Son, Butler,	
1730	†Swift's Pure Plantation Phosphate and Potash.	Jas. McCullough, Kittanning,	6.43
1566		H. W. Sweigart, Gap,	
1718	†Swift's Pure Special Phosphate and Potash.	G. R. Stewart, Indiana,	7.28
1165		G. R. Stewart, Indiana,	
821		B. S. Tallmadge, McKean,	
1231		S. A. Hostetler, Bellevue,	
	I. P. THOMAS & SONS CO., PHILADELPHIA, PA.		
289	†Bulls Eye Fertilizer,	Ed. Shuey, Lickdale,	9.85
105		B. M. Stoltzfus, Elverson,	
331		Phil. Noll, Millersburg,	
834	†Pilot Potash Manure,	John S. Engle, Hummelstown,	8.38
646		Frances Kerstetter, Sunbury,	
973		Geo. Hayden, Kesslerville,	
486	†Special Corn and Grain Fertilizer,	Henry & Bressler, Athens,	9.23
280		Ed. Shuey, Lickdale,	
972		Geo. Hayden, Kesslerville,	
648	Thomas' Square Deal Fertilizer,	Francis Kerstetter, Sunbury,	2.95
	JAMES THOMAS, WILLIAMSPORT, PA.		
1066	†Thomas' Dissolved Alkaline Phosphate,	McEwen Hdw. Co., New Bethlehem,	9.75
1189		T. E. Shoemaker, Granville Summit,	
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.		
315	†Alkaline,	R. C. Garber, Washington,	11.33
1451		Frederick & Inks, Fairchanee,	
1450	Tusearora Potash Mixture,	Frederick & Inks, Fairchance,	5.08
	J. E. TYGERT & CO., PHILA., PA., BY A. A. C. CO., NEW YORK.		
1601	Soluble Phosphate and Potash,	Geo. S. Miller, Mifflinville,	9.20
	UNION CHEMICAL WORKS, INC., NORTH WALES, PA.		
1539	Super Phosphate and Potash No. 1,	Harry K. Mohr, Quakertown,	4.03
875	Super Phosphate and Potash for Potatoes,	Christian Kreider, Lebanon,	7.43

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.				
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.			
7.30	6.00	.83	8.13	7.00	3.65	.....	3.65	3.00	13.69	15.50 17.00 15.00	1226 986 1482
5.93	6.00	.47	6.40	6.50	2.97	.....	2.97	3.00	11.86	13.00 14.00 15.00	1222 761 1721
8.90	8.00	.28	9.18	8.50	4.86	.....	4.86	5.00	15.86	15.00 ..... 15.00	684 249 709
10.29	10.00	.70	10.99	10.50	2.17	.....	2.17	2.00	14.26	15.00 14.00 15.00	685 156 765
13.46	12.00	1.10	14.56	12.50	6.06	.....	6.06	5.00	20.65	18.65	1904
11.18	10.00	.99	12.15	.....	2.17	.....	2.17	2.00	14.98	14.00	2186
8.55	8.00	.78	9.33	9.00	2.66	.....	2.66	2.00	13.54	13.50	7
10.80	10.00	1.03	11.83	.....	5.75	.....	5.75	5.00	18.43	19.75	180
11.18	10.00	.97	12.15	.....	2.43	.....	2.43	2.00	15.31	20.00	16
9.90	10.00	1.22	11.12	.....	7.88	.....	7.88	8.00	20.02	24.00 21.00 21.00	1472 735 1730
*7.71	8.00	.86	*8.57	9.00	5.32	.....	5.32	5.00	15.67	15.00 16.50	1566 1718
10.19	10.00	1.49	11.68	.....	1.92	.....	1.92	2.00	14.23	15.50 16.00 15.50	1165 821 1231
10.03	10.00	.73	*10.76	11.00	7.82	.....	7.82	8.00	19.84	19.50 20.00 18.00	289 105 331
8.41	8.00	.56	8.97	9.00	5.51	.....	5.51	5.00	16.27	15.50	834 646 973
10.75	10.00	.23	10.98	11.00	6.36	.....	6.36	6.50	18.72	20.00 20.50	486 280 972
9.05	9.00	.64	*9.69	10.00	3.71	.....	3.71	3.00	14.94	16.00	648
*9.48	10.00	.25	*9.73	11.00	2.17	.....	2.17	2.00	13.53	18.00 17.00	1066 1189
10.10	10.00	.80	10.90	10.50	5.10	.....	5.10	5.00	17.17	20.00 20.00	315 1451
6.06	6.00	.61	6.67	6.50	2.49	.....	*2.49	3.00	12.53	16.00	1450
10.37	10.00	1.44	11.81	11.00	2.15	.....	2.15	2.00	15.48	15.50	1601
*8.16	10.00	1.26	9.42	.....	2.99	.....	2.99	2.00	13.78	18.00	1539
8.14	8.00	.31	8.45	.....	10.31	.....	10.31	10.00	20.89	20.00	875

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	UNITED STATES FERTILIZER CO., THE, BALTIMORE, MD.		
72	†Farm Bell Alkaline Mixture,	L. A. Geiger, Joanna,	8.73
1431		J. G. Everett, Somerset,	
269		Biglerville Whse. Co., Biglerville,	
165	†Farm Bell Fruit and Grain Grower,	J. Wilson Hamilton, Meadville,	9.28
609		E. M. Weller & Co., Landis Store,	
166		J. Wilson Hamiltou, Meadville,	
71	†Farm Bell Phosphate and Potash,	L. A. Geiger, Joanna,	9.23
629		L. H. Miller, New Oxford,	
247	Farm Bell Phospho Potassa,	Jno. H. Weaver, East Earl,	10.73
1435	Farm Bell Ten Five Mi'ture,	J. G. Everet, Somerset,	7.43
	VIRGINIA CAROLINA CHEMICAL CO., RICHMOND, VA.		
1198	†V. C. C. Co's Peerless Phosphate and	Geo. Kunkle, Wiufield,	7.93
1310	Potash.	J. D. Markle, Hanover,	
630	†V. C. C. Co's Union Super Phosphate,	J. Weaver & Bro., New Oxford,	5.68
1321		Frank Hope, Spring Grove,	
	W. E. WHANN & CO., PHILADELPHIA.		
1516	Whann's Alkaline Phosphate,	E. H. Keen & Co., Parkesburg,	9.58
1517	Whann's Chester Valley Favorite Fertilizer.	E. H. Keen & Co., Parkesburg,	6.35
	ROBERT A. WOOLDRIDGE CO., THE, BALTIMORE, MD.		
381	Wooldridge's Ideal Grain and Grass Producer.	V. A. Stufft, Imler,	8.55
2164	Wooldridge's German Potash Mixture,	H. G. Niggins, New Providence,	7.73
562	†Wooldridge's No. 2 Phosphate and Pot-	Rufus Bohr, Snedburg,	8.83
1111	ash.	Henry D. Bard, Reinhold,	
788	†Wooldridge's Old Sledge Phosphate,	C. C. Catherman, Milmont,	8.23
1401		F. A. Hurst, Huntingdou,	
	YORK CHEMICAL WORKS, YORK, PA.		
1317	Dempwolf's Black Cross,	M. J. Sheffer, Hanover,	5.85
693		H. M. Berkheimer, Abbottstowu,	
598	†Dempwolf's Phosphate and Potash,	C. B. Reppert, Shoemakersville,	6.90
910		Norman G. Miller, Cessna,	
338		L. T. Lebo, Halifax,	
235	†Dempwolf's York Special,	Sugar Valley Grange No. 1470, Loganton.	7.25
358		Andrew Coughenour, Harnesville,	

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.				
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.			
10.26	10.00	.54	*10.80	11.00	2.85	.....	2.85	2.00	14.89	14.00	72
										13.25	1431
										20.00	269
10.51	10.00	.36	10.87	11.00	8.68	.....	8.68	8.00	20.97	21.00	165
										22.00	609
										16.00	166
8.91	8.00	.13	9.04	9.00	4.99	.....	4.99	5.00	15.97	15.00	71
										13.50	629
12.79	12.00	.17	12.96	13.00	5.47	.....	5.47	5.00	19.23	15.00	2217
10.48	10.00	.29	*10.77	11.00	5.96	.....	5.96	5.00	18.13	15.75	1435
8.68	8.00	1.61	10.29	9.00	2.15	.....	2.15	2.00	13.44	12.00	1198
										13.50	1310
6.36	6.00	1.71	8.07	7.00	3.22	.....	3.22	3.00	12.85	12.00	630
										14.00	1321
10.10	8.00	1.50	11.60	9.00	2.17	.....	2.17	2.00	14.41	15.00	1516
10.42	10.00	.76	11.18	11.00	10.81	.....	10.81	10.00	23.22	21.00	1517
10.70	10.00	.57	11.27	11.00	4.29	.....	4.29	4.00	16.82	18.00	381
10.06	10.00	.45	*10.51	11.00	2.44	.....	2.44	2.00	14.30	14.00	2164
8.49	8.00	.69	9.18	9.00	4.83	.....	4.83	5.00	15.72	16.00	562
										13.25	1111
12.72	12.00	.64	13.36	13.00	5.55	.....	5.55	5.00	19.45	18.00	788
										.....	1401
10.52	10.00	.47	10.99	10.50	2.50	.....	2.50	2.00	14.72	16.00	1317
										14.00	693
10.74	10.00	.54	11.28	10.50	2.44	.....	2.44	2.00	14.84	13.00	598
										15.00	910
										.....	338
8.50	8.00	.36	8.86	8.50	4.04	.....	4.04	4.00	14.78	14.50	235
										17.50	358

*Constituent falls below guaranty.

DISSOLVED BONE

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	BOWKER FERTILIZER CO., NEW YORK.	
591	†Bowker's Ammoniated O. I. O. Phos-	Hamburg Supply House, Hamburg,
1612	phate.	Mrs. J. H. Rose, Riverside,
	D. B. MARTIN CO., PHILADELPHIA, PA.	
33	Pure Dissolved Animal Matter,	N. M. Dodd, Tippecanoe,
150	†Martin's Crop Producer,	Cook & Co., Dillsburg,
1244		A. F. Kimmel, Orwigsburg,
	F. W. TUNNELL & CO., PHILADELPHIA, PA.	
1956	Raw Acidulated Animal Compound,	M. C. Michener, Media,

†Composite sample.

FERTILIZERS.

Acid and Nitrogen.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.					Nitrogen in 100 Pounds.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Available.		Insoluble.	Total.						
	Found.	Guaranteed.		Found.	Guaranteed.	Found.	Guaranteed.			
8.13	10.42	10.00	1.91	12.33	11.00	.95	.62	19.10	16.00 16.10	591 1612
6.00	*10.31	12.00	3.65	13.96	.....	1.69	1.65	23.24	.....	33
10.45	11.09	10.00	1.75	12 84	.....	1.23	1.03	21.07	15.25 17.00	150 1244
5.00	10.26	10.00	9.12	*19.38	20.00	*1.16	1.64	23.10	28.00	1956

*Constituent falls below guaranty.

ACIDULATED

Furnishing

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	AMERICAN AGRICULTURAL CHEMICAL CO., THE, NEW YORK.	
1063	†14% Acid Phosphate,	S. K. Smith & Son, New Bethlehem,
682		H. A. Cramer & Son, Monroeton,
1183		Lamont Berry, Troy,
700	16% Acid Phosphate,	J. H. Kelly, Littlestown,
1647	†12% Acid Phosphate,	Punxsutawney Milling Co., Punxsutawney,
1747		W. R. Stoughton & Son, Petrolia,
35	Detrick's Dissolved S. C. Phosphate,	The Atlantic Crushed Coke Co., Greensburg,
1356	Lazaretto Dissolved Phosphate,	Grove & Uffelman, Park,
721	Maryland Dissolved S. C. Phosphate,	L. R. Over, Curryville,
1957	Reese's Dissolved Phosphate of Lime,	Wm. C. Ball, Media,
	ARMOUR FERTILIZER WORKS, INC., BALTIMORE, MD.	
479	Star Phosphate,	Windham Grange, Nichols, N. Y.,
361		P. J. Cover & Son, Meyersdale,
901		Grant Beaver, Catawissa,
	ATLANTIC FERTILIZER CO., BALTIMORE, MD.	
949	Atlantic Dissolved Phosphate,	Roht. Speicher, Rockwood,
	BAUGH & SONS CO., PHILADELPHIA, PA.	
436	†Baugh's High Grade Acid Phosphate,	Ed. Brinton & Sons, West Chester,
78		L. A. Geiger, Joanna,
1136		A. W. Eves, Iola,
472	†Baugh's 16% Acid Phosphate,	Jas. E. Eastman, Rome,
394		M. L. Logan, Woodbury,
635		E. M. Neely, New Oxford,
	BOWKER FERTILIZER CO., NEW YORK.	
1426	†Bowker's Dissolved Phosphate,	Peffer & Son, Punxsutawney,
1977		Murry & Co., Honesdale,
	CENTRAL CHEMICAL CO., HAGERSTOWN, MD.	
45	C. C. C. Acid Phosphate,	D. R. Bomberger, Manheim,
1139	†C. C. C. Dissolved Phosphate,	W. F. Slagle, Bloomsburg,
1862		J. A. Witherspoon, Mercersburg,
	CHESAPEAKE CHEMICAL CO., THE, BALTIMORE, MD.	
590	C. C. Co.'s Dissolved Phosphate,	Wm. Biller, Patton,
	COE MORTIMER CO., THE, NEW YORK.	
1772	E. Frank Coe's High Grade Soluble Phosphate.	A. H. Cohleigh, Pikes Creek,
	COLUMBIA GUANO CO., BALTIMORE, MD.	
11	Columbia 14% Acid Phosphate,	P. E. Phillips, New Bethlehem,
	W. S. FARMER & CO., BALTIMORE, MD.	
1370	W. S. Farmer & Co.'s Dissolved S. C. Phosphate.	D. J. Trout, Stewartstown,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
1364	†Griffith & Boyd's High Grade Acid Phosphate.	C. Leib & Co., Stewartstown,
1191		Adam Krug, Allenwood,
1995		W. C. Herr, Strasburg,
	W. S. HASTINGS & SON, ATGLEN, PA.	
1513	Clear Acid Phosphate,	W. S. Hastings & Sons, Atglen,
	S. M. HESS & BROS., INC., PHILADELPHIA, PA.	
716	S. M. Hess & Bros.' High Grade Acid Phosphate.	J. H. & H. J. Hoover, Patton,

†Composite sample.

ROCK PHOSPHATE.

Phosphoric Acid.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Available.		Insoluble.	Total.				
	Found.	Guaranteed.		Found.	Guaranteed.			
9.45	14.61	14.00	1.29	15.90	15.00	14.18	14.00	1063
							15.00	682
							15.00	1183
7.78	17.03	16.00	.57	17.60	17.00	15.62	14.00	700
6.55	*11.13	12.00	2.39	13.52	13.00	12.06	20.00	1647
							26.00	1747
8.74	*13.52	14.00	1.13	*14.65	15.00	13.35	.....	35
8.33	15.15	14.00	.67	15.82	15.00	14.35	12.00	1356
8.68	14.06	14.00	96	15.02	15.00	13.66	12.00	721
6.30	14.25	14.00	.85	15.10	15.00	13.78	14.00	1957
9.65	14.65	14.00	.47	15.12	14.50	13.92	12.00	479
							16.00	361
							12.00	901
8.50	14.23	14.00	.89	15.12	15.00	13.75	13.00	949
5.63	16.59	14.00	1.31	17.90	.....	15.62	13.00	436
							12.00	78
							12.00	1136
12.33	17.31	16.00	1.24	18.55	.....	16.11	12.36	472
							12.30	394
							12.00	635
6.50	*10.41	11.00	2.08	12.49	12.00	11.48	15.00	1426
							15.00	1977
9.62	15.53	14.00	.46	15.99	15.00	14.56	.....	45
6.85	14 17	14.00	.35	14.52	.....	13.50	14.00	1139
							13.00	1682
8.78	15.38	14.00	3.53	18.91	15.00	15.55	13.00	590
8.29	14.92	14.00	1.44	16.36	15.00	14.46	.....	1772
3.35	15.13	14.00	.57	15.70	14.50	14.31	.....	11
10.55	15.19	14.00	.57	15.76	15.00	14.35	12.50	1370
9.68	14.78	14.00	2.01	16.79	15.00	14.58	13.00	1364
							13.00	1191
							14.00	1995
1.95	16.08	14.00	.65	16.73	.....	15.03	12.00	1513
9.58	14.78	14.00	.64	15.42	15.00	14.06	12.50	716

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	HUBBARD FERTILIZER CO., THE, BALTIMORE, MD.	
1738	Hubbard's 16% Phosphate,	Alex Strittmatter, Ehenshurg,
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO, N. Y.	
2064	Dissolved Phosphate,	H. B. Harn, Mercer,
	LANCASTER CHEMICAL CO., THE, LANCASTER, PA.	
2002	Acid Phosphate,	J. B. Bucher, Litltz,
	F. MEHRING, KEYMAR, MD.	
703	Acid Phosphate,	J. N. Slifer, Littlestown,
	NITRATE AGENCIES CO., NEW YORK.	
410	†High Grade Acid Phosphate,	B. R. Watson, Oxford,
86		Wernersville Asylum Farm,
1257		Wm. K. Goss, Dallas,
	G. OBER & SONS CO., BALTIMORE, MD.	
642	†Ober's Dissolved Phosphate,	John Phillips, Sunbury,
690		Denton Myers, East Berlin,
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.	
1399	Piedmont 14% Acid Phosphate,	J. G. Simpson, Huntingdon,
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURGH, PA.	
23	Acid Phosphate,	B. Way Co., Freeport,
	RAMSBURG FERTILIZER CO., THE, FREDERICK, MD.	
706	Super Phosphate,	Humbert & Krug, Littlestown,
	RASIN MONUMENTAL CO., BALTIMORE, MD.	
859	Sea Wall Special,	Elias S. Brubaeher, Richland,
	READING BONE FERTILIZER CO., READING, PA.	
421	†Soluble Dissolved Phosphate,	M. B. Hickman, West Chester,
1225		Benj. Hoffman, McClure,
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.	
1446	†Royster's 14% Acid Phosphate,	H. A. Grimm, Fairchance,
132		Abraham Hostetter, Johnstown,
1724		I. W. Gibson, Indiana,
710	Royster's High Grade 16% Acid Phosprate,	Humbert & King, Littlestown,
	SCHAAL SHELDON FERTILIZER CO., BUFFALO, N. Y.	
829	Dissolved Phosphate,	Brooklyn Milling Co., Spartanshurg,
	SCOTT FERTILIZER CO., THE, ELKTON, MD.	
857	†Scott's Tip Top Soluble Phosphate,	Elias S. Bruhacher, Richland,
1943		Wm. C. Hallhrook, Ercildown,
	SMITH AGRICULTURAL CHEMICAL CO., THE, COLUMBUS, OHIO.	
176	Ohio Farmer Alkaline Phosphate,	C. R. Forbes, Albion,
	SWACK'S FERTILIZER WORKS, DUBOIS, PA.	
2234	Swack's Acid Phosphate,	Wm. C. Moore's Farm, Corsica,
	SWIFT & CO., BALTIMORE, MD.	
42	Swift's Pure High Grade Acid Phosphate,	R. Smith Guthrie, Parkesburg,
	JAMES THOMAS, WILLIAMSPORT, PA.	
1067	†Thomas' Dissolved Florida Phosphate,	MeEwer Hdw. Co., New Bethlehem,
1412		Keystone Hdw. Co., Reynoldsville,

†Composite sample.

PHOSPHATE—Continued.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Available.		Insoluble.	Total.				
	Found.	Guaranteed.		Found.	Guaranteed.			
9.60	17.29	16.00	.28	17.57	17.00	15.75	14.00	1738
5.00	15.22	14.00	.43	15.65	15.00	14.31	15.50	2064
9.28	*13.34	14.00	1.48	14.82	15.00	13.34	12.00	2002
7.40	18.06	16.00	.28	18.34	17.00	16.30	14.00	703
10.65	16.20	14.00	1.31	17.51	15.00	15.33	13.00 ..... 13.50	410 86 1257
7.68	16.79	14.00	.16	16.95	15.00	15.36	14.00 13.00	642 690
6.60	15.24	14.00	1.06	16.30	.....	14.56	13.50	1399
10.34	12.33	11.00	.96	13.29	12.00	12.46	16.00	23
11.98	17.25	14.00	.77	18.02	.....	15.90	12.00	706
3.83	11.94	10.00	.98	12.92	11.00	12.15	12.00	859
9.55	13.74	12.00	1.20	14.94	13.00	13.53	13.00 15.60	431 1225
8.05	14.47	14.00	1.33	15.80	14.50	14.10	15.00 14.00 15.00	1446 132 1724
5.60	*15.26	16.00	.70	*15.96	16.50	14.53	14.00	710
8.30	13.99	14.00	.57	*14.56	15.00	13.48	15.00	829
9.30	17.46	14.00	.33	17.79	.....	15.90	14.50 13.00	857 1943
6.20	14.86	14.00	2.13	16.99	.....	14.67	18.00	176
13.15	15.57	14.00	.07	15.64	.....	14.46	11.00	2234
5.60	16.43	16.00	1.21	17.64	.....	15.48	14.00	42
8.38	12.28	12.00	.16	*12.44	14.00	12.12	15.00	1067 1412

*Constituent falls below guaranty

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	F. W. TUNNELL & CO., PHILADELPHIA, PA.	
517	Dissolved Rock,	W. M. Gehman, Macungie,
	J. E. TYGERT CO., THE, PHILADELPHIA, PA., BY THE A. A. C. CO.	
2223	Tygert's Acid Phosphate,	Wm. J. Groover & Son, Newfield,
	UNITED STATES FERTILIZER CO., THE, BALTIMORE, MD.	
1132	†Farm Bell Acid Phosphate,	John Sones, Opp,
268		Biglerville Warehouse Co., Biglerville,
1124		Wm. Ewes, Jerseytown,
	ROBT. A. WOOLDRIDGE CO., THE, BALTIMORE, MD.	
561	†Wooldridges Florida Acid Phosphate,	Rufus Bohr, Snedburg,
785		C. C. Catherman, Millmont,

†Composite sample.

PHOSPHATE—Continued.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Available.		Insoluble.	Total.				
	Found.	Guaranteed.		Found.	Guaranteed.			
3.85	*12.04	14.00	2.93	14.97	15.00	12.92	15.00	517
8.50	14 33	14.00	1.21	15.54	15.00	13.96	16.00	2233
10.30	16.60	14.00	.23	16.83	15.00	15.25	13.00 14.00 13.50	1132 268 1124
10.08	*13.02	14.00	.53	*13.55	15.00	12.76	14.00 13.85	561 785

*Constituent falls below guaranty.

GROUND BONE

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	AMERICAN AGRICULTURAL CHEMICAL CO., THE, NEW YORK.	
419	†Fine Ground Bone,	F. G. Evans, Kelton,
117		Wm. Biller, Patton,
939		A. A. Miller, Somerset,
570	†High Grade Ground Bone,	H. L. Orr, Tyrone,
1035		J. G. Leighton, Tunkhannock,
726	†Pure Raw Bone,	H. L. Shultz, Hollidaysburg,
247		H. L. Lindner, Milton,
1367		D. J. Trout, Stewartstown,
	AMERICAN FERTILIZING CO., BALTIMORE, MD.	
1559	Pure Raw Bone,	Jones Eavenson, Christiana,
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.	
584	†Bone Meal,	Chas. Yaeckle, Patton,
1571		J. C. Walker & Sons Co., Gap,
	ASSOCIATED CHEMICAL CO., HAGERSTOWN, MD.	
2131	Fine Raw Bone,	Smith Bros. Co., Ridgway,
	BAUGH & SONS CO., PHILADELPHIA, PA.	
1158	†Baugh's Raw Bone Meal, Warranted Pure.	A. George & Son, Homer City,
1135		A. W. Eves, Iola,
1515		E. H. Keen & Co., Parkesburg,
	BERG CO., THE, PHILADELPHIA, PA.	
408	Berg's Raw Bone, Fine,	B. R. Watson, Oxford,
1998		W. C. Herr, Strass,
	BOWKER FERTILIZER CO., NEW YORK.	
12	†Bowker's Bone Flour for Florists' Use,	W. M. Deyoe & Co., South Oil City,
26		W. C. Beekert, Pittsburgh,
	CAMBRIA FERTILIZER CO., JOHNSTOWN, PA.	
37	Pure Fine Ground Bone Dust,	Claude Davis, Windber,
	COLUMBIA GUANO CO., BALTIMORE, MD.	
60	Columbia Fine Ground Bone Meal,	Scranton Florist Supply Co., Scranton,
	JOSIAH COPE & CO., BALTIMORE, MD.	
1930	Joseph Cope & Co.'s Pure Raw Bone,	F. E. Bailey, Northbrook,
	WALLACE DUNGAN, DOYLESTOWN, PA.	
1916	Bone Flour,	Wallace Dungan, Doylestown,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
1996	Pure Fine Ground Bone Meal,	W. C Herr, Strasburg,
1365	Soft Ground Bone Meal,	J. C. Leib & Co., Stewartstown,
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
1707	Bone Meal,	A. S. Lent, Middleburg Center,
	JARECKI CHEMICAL CO., THE, SANDUSKY, OHIO.	
1461	Pure Ground Bone,	Clark Bros., Oil City,
	LANCASTER CHEMICAL CO., LANCASTER, PA.	
2091	No. 9 Bone Meal,	Nevin Miller, Cottage,
	HENRY F. MITCHELL CO., PHILADELPHIA, PA.	
54	Mitchell's Pure Bone Meal.	Henry F. Michell, Philadelphia,

†Composite sample.

FERTILIZERS.

Acid and Nitrogen.

Moisture in 100 pounds.	Mechanical Analysis.		Chemical Analysis.				Computed commercial value of 2,000 pounds at Department ratings.	Selling price of 2,000 pounds at point of selection.	Sample number.
			Phosphoric Acid.		Nitrogen.				
	Diameter less than 1-50 inch "fine."	Diameter greater than 1-50 inch "coarse."	Found.	Guaranteed.	Found.	Guaranteed.			
4.90	40	60	25.30	22.88	2.44	2.47	30.10	$32.00	419
								32.00	117
								31.00	939
5.78	53	47	20.63	20.59	3.76	3.29	32.68	36.00	570
								35.00	1035
6.53	54	46	21.41	21.51	3.75	3.70	33.31	34.00	726
								34.00	247
								32.00	1367
6.15	47	53	*21.88	22.50	3.84	3.70	33.54	31.00	1559
3.15	58	42	23.03	22.50	2.67	2.47	30.52	29.00	584
								30.00	1571
4.40	58	42	23.56	20.00	*2.64	3.70	30.90	38.00	2131
6.75	64	36	21.62	21.50	3.69	3.70	33.92	33.00	1158
								33.00	1135
								32.00	1515
4.38	55	45	23.03	22.00	3.55	3.00	33.80	31.00	408
								30.00	1998
3.40	98	2	22.00	19.3	3.11	2.06	34.38	.....	12
								††55.00	26
5.15	46	54	24.03	20.00	3.13	3.00	32.32	32.00	37
12.33	57	43	23.58	22.90	2.76	2.47	31.24	.....	60
6.13	61	39	21.36	21.51	3.66	3.70	33.36	32.00	1930
10.45	62	38	21.41	20.00	4.74	3.71	37.75	32.00	1916
5.78	59	41	*18.61	22.00	3.69	3.30	31.38	31.00	1996
3.63	71	29	15.90	11.00	2.37	2.50	24.70	27.00	1365
4.40	58	42	*19.02	22.00	3.75	2.40	31.30	30.00	1707
4.10	59	41	23.48	20.00	2.69	2.50	31.12	35.00	1461
3.80	52	48	22.32	19.00	3.93	3.71	34.77	28.00	2091
13.17	71	29	*23.39	24.59	*2.96	3.30	32.85	35.00	54

*Constituent falls below guaranty.
††$2.75 per cwt.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	NITRATE AGENCIES CO., NEW YORK CITY.	
411	Ground Bone,	B. R. Watson, Oxford,
	J. D. PERKINS, COATESVILLE, PA.	
1012	Perkins' Pure Bone Meal,	Edw. Tingley, New London,
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURGH, PA.	
27	No. 1 Pure Raw Bone Meal,	W. C. Beckert, Pittsburgh,
	Pioneer FERTILIZER CO., CLEVELAND, OHIO.	
19	Pioneer Bone Meal,	Wm. H. Roadhouse, Greenville,
	POLLOCK FERTILIZER CO., THE, BALTIMORE, MD.	
1008	Soft Ground Bone,	Harvey Spencer, Coehranville,
	RASIN MONUMENTAL CO., BALTIMORE, MD.	
1926	Pure Raw Bone (3.50),	W. H. Walker & Co., Kennet Square,
	READING BONE FERTILIZER CO., READING, PA.	
48	Pure Bone Meal,	I. S. Hallman, Skippaeh,
981	Pure Raw Bone,	A. R. Kulp, Pottstown,
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.	
131	Royster's Pure Raw Bone Meal,	Abraham Hostetter, Johnstown,
	M. L. SHOEMAKER & CO., PHILADELPHIA, PA.	
57	Swift Sure Bone Meal,	Bennett & Lear, West Chester,
	F. W. TUNNELL & CO., INC., PHILADELPHIA, PA.	
1004	Pure Ground Bone,	R. B. Jackson, Coehranville,
	UNITED STATES FERTILIZER CO., THE, BALTIMORE, MD.	
29	Farm Bell Raw Bone,	Pittsburgh Cut Flower Co., Bakerstown,
	VIRGINIA CAROLINA CHEMICAL CO., RICHMOND, VA.	
1890	V. C. C. Co.'s Pure Raw Bone,	McCalmont & Co., Bellefonte,

†Composite sample.

FERTILIZERS—Continued.

Moisture in 100 pounds.	Mechanical Analysis.		Chemical Analysis.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
			Phosphoric Acid.		Nitrogen.				
	Diameter less than 1-50 inch "fine."	Diameter greater than 1-50 inch "coarse."	Found.	Guaranteed.	Found.	Guaranteed.			
4.03	41	59	24.10	22.88	2.78	2.47	30.67	30.00	411
6.03	68	32	27.23	24.00	2.52	2.47	33.82	.....	1012
6.03	33	67	22.89	22.00	4.24	3.70	34.74	††42.00	27
3.00	59	41	24.32	24.00	2.97	2.47	32.70	30.50	19
7.20	49	51	*13.46	13.73	2.50	2.47	22.48	27.00	1008
2.38	72	28	20.97	16.00	*2.66	2.88	29.85	29.00	1926
7.45	38	62	23.38	18.32	4.36	2.46	35.83	30.00	48
5.23	33	67	22.29	18.32	3.52	3.29	31.51	32.00	981
5.63	81	19	22.46	21.50	3.80	3.70	36.21	32.00	131
3.87	56	44	22.18	20.00	5.49	4.53	40.81	†††45.00	57
12.68	56	44	27.61	25.00	*2.11	2.46	31.62	32.00	1004
6.66	55	45	21.17	20.50	3.69	3.69	33.00	.....	29
5.98	51	49	*21.46	22.50	3.64	3.70	32.73	.....	1890

*Constituent falls below guaranty.
††$2.10 per cwt.
†††$2.25 per cwt.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.		
904	†Genuine German Kainit,	Clarence Mickle, Osterburg,	1.25
222		W. D. Imes, Doyles Mills,	
1009		Harvey Spencer, Cochranville,	
126	Ground Tankage,	O. B. Wertz, Christiana,	7.73
1557	†Muriate of Potash,	Jones Eavenson, Christiana,	.33
571		H. L. Orr, Tyrone,	
1837		B. F. Horting, Newport,	
572	†Nitrate of Soda,	H. L. Orr, Tyrone,	.99
90		W. J. Johnston, Sinking Springs,	
873		N. R. Yost, Myerstown,	
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.		
36	Muriate of Potash,	Frank Douglass, Indiana,	1.85
1142	†Nitrate of Soda,	A. Skelly, Ebensburg,	1.08
1420		Peffer & Son, Punxsutawney,	
	BAUGH & SONS CO., PHILADELPHIA, PA.		
678	†Genuine German Kainit,	Orwell Farmer's Club, Orwell,	1.40
579		H. L. Stultz & Bro., Altoona,	
1083		Jas. G. Kauffman, Dauberville,	
580	†Nitrate of Soda,	H. L. Stultz & Bro., Altoona,	1.05
227		John D. Miller, Richfield,	
851		A. G. Houtz, Myerstown,	
	BOWKER FERTILIZER CO., THE, NEW YORK.		
1773	†Muriate of Potash,	M. M. Harter, Nescopeck,	1.20
1975		Murray & Co., Honesdale,	
	CENTRAL CHEMICAL CO., THE, HAGERSTOWN, MD.		
4	Nitrate of Soda,	Michael Ickes, Scotland,	.71
	COE MORTIMER CO., THE, NEW YORK.		
310	†Muriate of Potash,	I. W. Scott Co., Pittsburgh,	.70
1049		I. W. Scott Co., Pittsburgh,	
742	†Thomas's Phosphate Powder,	Geo. Walker & Sons, Butler,	.07
303		I. W. Scott Co., Pittsburgh,	
778		Union Hardware Co., Mifflinburg,	
	COLUMBIA GUANO CO., BALTIMORE, MD.		
59	Muriate of Potash,	Scranton Florist Supp'y Co., Scranton,	6.74
	GERMAN KALI WORKS, INC., NEW YORK.		
501	†Muriate of Potash,	Farmer's Club, Pine Grove,	7.35
1743		E. F. Hays & Sons, Chicora,	
	GRIFFITH & BOYD CO., BALTIMORE, MD.		
879	Nitro Crop Feeder,	E. A. Slagle, Paxinos,	4.53
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.		
1708	Nitrate of Soda,	A. S. Lent, Middleburg Center,	.23
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
389	†Genuine German Kainit,	J. N. Wertz, Bedford,	.15
219		J. K. McLaughlin, Spruce Hill,	
915		A. M. McClure, Everett,	
1150	Muriate of Potash,	Veith Bros., Ebensburg,	.07
1151	Nitrate of Soda,	Veith Bros., Ebensburg,	1.75

†Composite sample.

FERTILIZERS.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds..				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Total.					Total.						
Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
.....	.....	.....	.....	.....	13.20	.....	13.20	12.00	.....	.....	13.22	12.00 ..... 12.00	904 222 1009
.....	.....	.....	14.12	13.73	.....	.....	.....	.....	5.08	4.94	35.85	28.00	126
.....	.....	.....	.....	.....	51.82	.....	51.82	49.00	....	....	46.03	42.50 50.00 40.25	1557 571 1837
.....	.....	.....	.....	.....	.....	.....	.....	.....	16.00	15.00	61.20	70.00 ..... 60.00	572 90 873
.....	.....	.....	.....	.....	55.52	.....	55.52	48.00	.....	.....	49.18	.....	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	15.66	14.81	59.91	62.40 65.00	1142 1420
.....	.....	.....	.....	.....	.....	.....	.....	.....	16.10	15.23	61.57	..... 65.00 60.00	678 579 1083
.....	.....	.....	.....	.....	13.02	.....	13.02	12.00	.....	.....	13.05	14.00 8.00 16.00	580 227 851
.....	.....	.....	.....	.....	50.84	.....	50.84	49.00	.....	.....	45.22	46.00 52.00	1773 1975
.....	.....	.....	.....	.....	.....	.....	.....	.....	15.98	14.04	61.20	.....	4
.....	.....	.....	.....	.....	51.68	.....	51.68	49.00	.....	.....	45.95	50.00 50.00	310 1049
.....	.....	.....	18.41	17.00	.....	.....	.....	.....	.....	.....	.....	.....	742 303 778
.....	.....	.....	.....	.....	53.38	.....	53.38	49.00	.....	.....	47.39	.....	59
.....	.....	.....	.....	.....	48.52	.....	48.52	48.00	.....	.....	43.23	45.00 55.00	501 1743
.....	.....	.....	.....	.....	4.00	.....	4.00	2.50	*6.36	7.50	37.44	37.00	879
.....	.....	.....	.....	.....	.....	.....	.....	.....	16.32	15.00	62.31	60.00	1708
.....	.....	.....	.....	.....	13.10	.....	13.10	12.00	.....	.....	13.14	13.00 ..... 14.00	389 219 915
.....	.....	.....	.....	.....	53.40	.....	53.40	49.00	.....	.....	47.39	47.50	1150
.....	.....	.....	.....	.....	.....	.....	.....	.....	15.98	15.00	61.20	60.00	1151

*Constituent falls below guaranty.

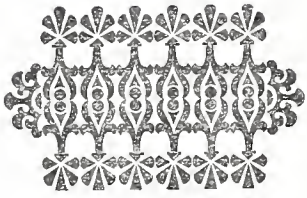
Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	NATURAL GUANO CO., AURORA, ILL.		
2221	Sheep's Head Brand Pulverized Sheep Manure.	Holmes Seed Co., Harrisburg, ...	5.25
	NITRATE AGENCIES CO., NEW YORK.		
1770	H. A. Brand Basic Slag, Thomas' Phosphate Powder.	C. E. Bronson, Alderson, ...	.00
412	†Muriate of Potash, ...	B. R. Watson, Oxford, ...	.58
1040		C. F. Waltrous, Montrose, ...	
1041		C. F. Waltrous, Montrose, ...	
978	†Nitrate of Soda, ...	J. B. Funk, Palm, ...	1.70
1767		C. E. Bronson, Alderson, ...	
	PULVERIZED MANURE CO., THE, NATIONAL STOCK YARDS, ILL.		
1293	†Wizard Brand Manure, ...	Cochran & Allcock, Carlisle, ...	6.95
2222		Walter S. Schell, Harrisburg, ...	
	RASIN MONUMENTAL CO., BALTIMORE, MD.		
1419	Muriate of Potash, ...	Peffer & Son, Punxsutawney, ...	20
115	Nitrate of Soda, ...	Chas. Yaeckle, Patton, ...	1.53
	READING BONE FERTILIZER CO., READING, PA.		
587	Muriate of Potash, ...	Reading Bone Fert. Co., Reading,...	.35
588	Nitrate of Soda, ...	Reading Bone Fert. Co., Reading,...	1.48
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.		
133	Muriate of Potash, ...	Abraham Hostetter, Johnstown, ...	.70
	SWIFT & CO., BALTIMORE, MD.		
2123	Swift's Nitrate of Soda, ...	E. J. Flynn, Grampian, ...	.78
	I. P. THOMAS & SONS CO., PHILADELPHIA.		
281	Top Dresser for Grass, ...	Ed. Shuey, Lickdale, ...	10.33
	VIRGINIA CAROLINE CHEMICAL CO., RICHMOND, VA.		
1197	Nitrate of Soda.	Geo. Kunkle, Winfield, ...	1.60
	YORK CHEMICAL WORKS, YORK, PA.		
697	†German Kainit, ...	A. P. Lippy, Littlestown, ...	1.43
1865		G. W. Schuckman, Duncannon, ...	

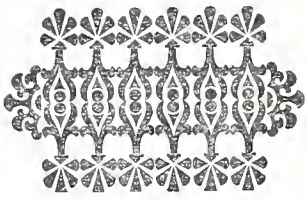
†Composite sample.

FERTILIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Total.					Total.						
Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
1.56	‡	.11	1.67	‡	1.80	.....	1.80	‡	2.50	‡	18.07	25.00	2221
.....	.....	.....	*15.77	17.00	.....	.....	.....	.....	.....	.....	.....	.....	1770
.....	.....	.....	.....	.....	51.70	.....	51.70	50.00	.....	.....	45.95	43.00	412
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50.00	1040
.....	.....	.....	.....	.....	.....	.....	.....	.....	15.84	15.00	60.65	60.00	1041
												56.00	978
												56.25	1767
1.47	‡	.10	1.57		2.36	.....	2.36	‡	2.54	‡	18.75	.....	1293
												25.00	2222
.....	.....	.....	.....	.....	50.18	.....	50.18	48.00	.....	.....	44.67	50.00	1419
.....	.....	.....	.....	.....	.....	.....	.....	.....	15.92	14.82	60.83	60.00	115
.....	.....	.....	.....	.....	51.18	.....	51.18	50.00	.....	.....	45.52	43.00	587
.....	.....	.....	.....	.....	.....	.....	.....	.....	16.20	15.50	61.94	60.00	588
.....	.....	.....	.....	.....	50.50	.....	50.50	49.00	.....	.....	45.93	45.00	133
.....	.....	.....	.....	.....	.....	.....	.....	.....	16.24	14.81	62.13	60.00	2123
.....	.....	.....	.....	.....	4.40	.96	5.36	5.00	9.06	9.04	52.56	47.50	281
.....	.....	.....	.....	.....	.....	.....	.....	.....	16.14	14.82	61.76	.....	1197
.....	.....	.....	.....	.....	13.54	.....	13.54	12.40	.....	.....	13.52	13.00	697
							.....	.....	.....	.....	.....	.....	1865

*Constituent falls below guaranty.
‡No guaranties furnished by manufacturer.





INSTRUCTIONS TO AGENTS ENGAGED IN COLLECTING SAMPLING OF FERTILIZERS FOR THE DEPARTMENT OF AGRICULTURE OF PENNSYLVANIA.

Fertilizer manufacturers sometimes allege that there have been errors made on the part of our sampling agents in selecting samples for analysis. It is due to manufacturers, purchasers and this Department, that the greatest care shall be exercised on the part of all connected with this work, to insure that the samples are fairly taken, are properly labeled and sealed, and are sent to the chemist in exactly the condition in which the goods are found. The following instructions have therefore been prepared for the guidance of agents to which strict adherence is required.

1.—No sample shall be taken from the manufacturer's warehouse.

2.—No agent shall draw in the same season more than two samples of any one brand of fertilizer, unless for some special reason, which he shall state in his report; if a second sample be drawn the agent must satisfy himself that it is not a part of the same shipment from which the first sample was taken.

3.—Each agent shall make report from time to time in duplicate, giving the number of each sample taken in consecutive order, the name and address of the manufacturer, the name and address of the agent selling the goods from which the sample is taken, an EXACT copy of the name of the brand of fertilizer and the selling price per ton of 2,000 lbs. at point of selection. He shall then subscribe his name to each report and send one copy to the official chemist as hereinafter provided, and the other to the Secretary of Agriculture, at Harrisburg, Pa.

4.—Agents shall keep full memoranda of all the samples, stating the number of packages from which the sample is taken, together with such additional notes of information as may be of service for future reference in case the accuracy of their work is called in question.

5.—The sample for analysis must be taken from at least four sacks, the sampling tube to be run its full length diagonally from top to bottom through the center of the sack, turned two or three times to fill it, and the contents emptied upon the oil cloth provided for mixing. Mix the material drawn from the four sacks by lifting the corners of the cloth alternately so as to roll the substance back and forth. Level the well-mixed material with the spatula to a thickness of not more than one inch. By the aid of the spatula divide the flattened heap into quarters, of which two, diagonally opposite shall be scraped from the cloth, and the remaining two remixed by the rolling process and again leveled. Through the heap thus prepared make two channels, crossing at right angles by use of the sampling channel, which must be pushed close to the cloth under the fertilizer and lifted so as to remove a vertical section of the heap. At ONCE, empty the materials thus taken through the funnel into the sampling bottle and screw down tight the bottle cap, after making sure that its cork or fibre cap-lining is in place.

6.—The sample being properly secured, the agent shall write his name and his record number for the sample upon both the bottle and the carton labels. The The bottle shall then be inserted in the carton and the latter IMMEDIATELY closed by drawing down the cover and inserting it in its place and putting a rubber band around the entire carton, the long way so as to hold the cover in place until the agent's seal can be applied.

7.—Place the cartons in the containers and when their number is complete, put on the cover; then place the tape around the container, once each way, and KNOT. Take your sealing wax and seal the tape to the container, by placing the sealing wax directly over the knot so as to secure the knot; then impress your seal and place in shipping case, enclose with them the agent's corresponding duplicate report, lock the case and ship it to the chemist.

8.—Agents must not use pencil in writing upon labels or in Record Book: Provided, however, that indelible pencil may be used if it makes a clearly legible impression and is not used when the paper, by reason of rain or other cause, is so moist as to cause the writing to blur.

9.—Agents, when practicable, will keep the Secretary of Agricultnre informed in advance, of the points to be visited, so as to be promptly reached by telegraph or mail, if necessary.

SPECIAL NOTICE.

This Department expects to continue the publication, early in each year, of a list of fertilizer manufacturers who have complied with the law of this State by filing with the Department the required analysis and paying the legal license fee, together with the trade names of the several brands for which such fees have been paid, so that dealers may be able to avoid making themselves liable to prosecution.

The policy of the Department for some time in the past was to bring prosecution against manufacturers, where it was possible to reach them, rather than against local dealers who are found selling unregistered goods, or goods that in other respects fail to meet the requirements of the law.

It was found, however, that in pursuing this method exclusively, we were sometimes subject to long delays before cases brought, came to trial, and as our witnesses are agents and chemists of the Department who are liable to change, it sometimes happened that before the cases were listed for trial they had gone to some other field and their presence in Court could not be secured.

For this reason prosecutions, when necessary, are now being instituted either against the manufacturers or persons selling goods that do not comply with the law as we may elect.

N. B. CRITCHFIELD,
Secretary of Agriculture.